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ABSTRACT

An 18-month study examined the way adults learn in rural settings, particularly those adults over the age of 25 who have not completed a high school education or its equivalency. The study was organized into three major phases. The first phase consisted of a survey interview of 93 adults living in a rural county in Vermont. The second phase involved indepth case studies with a sub-sample of 14 subjects from the first phase. The third phase entailed a comprehensive analysis of the data and dissemination of the results. Data indicated that 98 percent of those surveyed reported at least one major learning effort. The majority of learning efforts were self-planned and involved the self and/or a mixture of resources in the learning process. Most learning projects were non-credit. Among the most frequent obstacles to learning were time constraints, basic skills, and access to good information. Finally, those interviewed were most comfortable learning at home or in their communities. Recommendations called for developing more ways to determine what adult learners actually want as well as for reassessing the rights of self-directed learners and curriculum and delivery system issues for long-distance learners. (MN)

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ED227322

FINAL REPORT

NIE Adult Learning Project
University of Vermont

Project Title: Learning Projects and Self-Planned Learning Efforts Among Undereducated Adults in Rural Vermont

Principal Investigator: Dr. Constance Leean

Research Associate: Dr. Burton R. Sisco

Research Site: THE UNIVERSITY OF VERMONT
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CE 035 395

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FINAL REPORT

NIE Adult Learning Project
University of Vermont

Dr. Connie Leean, Principal Investigator
Dr. Burton Sisco, Research Associate

ABSTRACT

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ABSTRACT

Project Title: Learning Projects and Self-Planned Learning Efforts Among Undereducated Adults in Rural Vermont

Principal Investigator: Constance Leean, Ph.D.
Starting Date: 09/01/79
(Prospective) Ending Date: 02/28/81
Research Associate: Burton S. Sisco, Ph.D.
Extended To: 04/30/81

Funding:	
FY 80	$70,000.00
FY 81	42,000.00
FY 82	- -
Total	$112,000.00

Project Description

The purpose of this 18-month study was to examine the way adults learn in rural settings, particularly those adults over the age of 25 who have not completed a high school education or its equivalent. Recent studies of adult learning in non-formal settings indicate that most of the reported learning is self-planned. Our study compared the self-planned learning efforts of rural adults with findings from these other studies.

The study was organized in three major phases. The first phase consisted of a survey interview of 93 adults living in a rural county of Vermont. Utilizing an interview format developed by Allen Tough of the Ontario Institute for Studies in Education, this phase provided an overview of the learning activity that is currently underway in these communities. A random sample of adults was selected using household survey maps, transportation maps, town clerks and other local officials. A separate sample of adults enrolled in Adult Basic Education were also interviewed.

The second phase of the project involved indepth case studies with a sub-sample of 14 subjects from the first phase. Subjects were selected for representativeness in age, sex, educational background, and small town residency. Through extensive interviews and observations, three interviewers spent considerable time (15 hours each) with case study subjects, asking them a series of questions in conversational mode and documenting contextual and nonverbal datum. The series of questions was structured around Past, Present, and Future reflections about themselves and how these affect their learning process.

A third phase involved comprehensive analysis of the data and dissemination of results. Data was examined utilizing several perspectives from related disciplines such as cognitive theory, developmental theory and consciousness theory. A series of meetings involving education researchers interested in adult learning was sponsored to analyze the findings in light of their conceptual frameworks.

With a more complete picture of the nature of adult learning in non-formal, rural settings, further research and development needs have become clarified. With this in mind, a state-wide conference was held to examine the study's findings in light of (1) current adult learning programs, (2) competencies of successful self-planned learners, (3) delivery system needs in non-formal learning areas, and (4) policy implications for formal adult education institutions and programs.

EXECUTIVE SUMMARY

Project Title: Learning Projects and Self-Planned Learning Efforts Among Undereducated Adults in Rural Vermont

Sponsoring Agency: National Institute of Education (NIE)

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A. Project Overview

In order to understand the learning dynamics of rural adult learners with less than twelve years of education we conducted a three-phase research effort:

(1) Tough Replication - 93 interviews of randomly selected adults in four rural Vermont communities;

(2) Case Study - intensive interactions with 14 adults from Phase I probing their motivations, personal histories, learning and cognitive styles and future expectations; and

(3) Dissemination of Findings - discussions and critiques with a group of consultants and presentations of several state and national conferences.

The duration of the study was 18 months and its primary research contribution was the establishment of a cyclical model for case study research.

B. Purpose

The primary purpose was to investigate in-depth the self-directed learning activities of rural adults with less than 12 years of education, especially as these occur in nonformal settings.

A secondary purpose was to compare our Tough Replication findings with Allen Tough's Learning Projects' Research, 1967, 1971 to determine whether the learning of little educated rural adults looks like the learning of a middle class, educated population. A tertiary effort was to test a case study methodology developed by the researchers which encompassed a cooperative research team, a cyclical research process and the development of multiple data collection tools.

C. Background

In the last ten years, many research studies in adult learning have been conducted, building on Allen Tough's seminar work (1967, 1971) describing the phenomena of self-directed adult learning. While these studies provide an excellent framework for the study of adult learners, very few focus on the learning activity and learning processes of adults having less than 12 years of education. Because this is the target population of formal adult education programs which are supported by federal funds, it is important to examine the learning dynamics of these people. This was accomplished primarily through the Case Study Phase which utilized a modified Lewin (1941) Field Theory approach to examining the impact of a person's PAST memories and FUTURE expectations on his/her PRESENT learning style.

D. Methodology

For Phase I, Tough Replication, 16 interviewers were trained by Allen Tough in his "Learning Projects' Protocol," followed by a pilot test of the interview process in a small rural community in Vermont's Northeast Kingdom. With the help of The University of Vermont's Rural Studies Program, four average rural communities were chosen in Orleans County (which has a high percentage of adults with less than 12 years of education). Households were randomly selected where 93 people were interviewed over approximately a two-week period. A slightly modified version of Tough's protocol was used which took about two hours to administer.

In the Case Study Phase, 14 of the original Tough sample were selected to represent different ages, sex and educational background. Three researchers spent about 14 hours with each respondent over a period of about six months. Multiple data collection tools were used, some of them standardized and others developed through consultations with several consultants. Organized around a Field Theory Time framework, the tools involved interactive activities and conversational interviews which probed a person's PAST (Milestone

Exercise), examined the PRESENT (Learning Style and Cognitive Profile) and explored the FUTURE (Future Projection).

Analysis of data also utilized multiple techniques. For the standardized tools, such as cognitive profile tests, individual profiles were constructed over seven dimensions of cognition as a result of descriptive statistical analysis of data. For the case study interviews, the data was condensed into case stories of each respondent (checked for validity by each respondent) and then submitted to an iterative content analysis. That is, the three researchers did an independent analysis before checking for reliability of judgments. Also 12 consultants were brought together for two separate meetings to aid in this process. From this effort several levels of themes and issues emerged which represented the best thinking of several people over a period of several months.

E. Findings

From the Tough Replication phase of the study the following emerged as significant findings:

1. 98% of rural adults sampled reported at least one major learning effort.
2. Average learning projects overall was 4 per individual over 12 month time span.
3. There was no significant difference in number of learning projects between ABE and non-ABE sub-samples.
4. Neither age or sex appears to be a discriminating factor when comparing the mean number of learning projects.
5. People with education beyond high school tend to have been involved in more learning and in more varieties of learning efforts than those with lesser education.
6. Average learning project consumed about 106 hours resulting in a yearly average of over 400 hours.
7. Learning projects ranged over 15 distinct categories ranked as follows: (1) Arts and Crafts, (2) Structured Learning, (3) Home/Farm Improvement and (4) Job/Career.
8. The two most frequently stated motivations across all learning efforts were: (1) General Interest and (2) To Improve Basic Living Skills.
9. The majority of learning efforts were self-planned and involved the self and/or a mixture of resources in the learning process.

10. The preferred method of learning was "learning by doing."

11. Types of learning efforts cited most frequently as desired and anticipated were: (1) Hobby/Craft/Leisure Time Activities, (2) Education/Career Goals, (3) Basic Skill Development and (4) Technical Skill Development.

Major findings from The Case Study phase were:

1. Significant events in a person's life tend to shape the content of one's learning efforts.
2. Motivations for present learning efforts often linked to experiences in one's past which stimulated initial interest.
3. Approaches to learning and problem solving perceived by adults to be shaped by their parents' attitudes and actions.
4. Learning perceived as a natural part of everyday living by both "undereducated" and educated subjects.
5. Thinking and problem solving connected to times when people are alone, usually doing a mundane or repetitive task.
6. The process of visualization of an end state of the learning goal was described by most subjects as a way they began their learning efforts.
7. People enjoy self-directed learning efforts because they can work at their own pace and feel a sense of independent accomplishment.
8. The number of years of formal education is not necessarily correlated to one's cognitive abilities.
9. Self-directed learning is guided by a natural, rational problem solving mode.
10. Most recognized times when they got answers to problems through non-rational or altered states of consciousness.
11. Factors that tend to impede developmental growth are: (1) a limited sense of self, and (2) an inability to resolve contradictions in one's life.
12. Having access to resources and information does not appear to be a major problem in the learning efforts of these rural adults.
13. Women tend to be "seekers" with multiple interests in learning while men tend to be "focusers," improving and maintaining present skills and interests.

14. Women's desire to continue learning and growing is being stiffled by husbands' attitudes and lack of mobility.

15. Rural adult learners desire to continue their learning and expand their interests even in more formal or structured environments _if_ the information is perceived as useful and _if_ they as learners are perceived as people who have skills and talents.

F. Discussion

Tough Replication. The results from our replication study clearly parallel the findings from other Tough studies. As stated by Coolican (1974), "Almost everyone undertakes learning projects to some degree."

In the area of motivation, the majority of learning projects appeared to grow out of a practical, recreational or immediate need. This may suggest that many learning projects are situationally bound and dependent on an individual's mental, physical and/or financial condition.

Adult education programs that attempt to reach a population sampled by this study should keep in mind that:

(1) People tend to use a combination of resources in their self-directed learning efforts.

(2) Most learning projects are non-credit in nature.

(3) Most frequent obstacles to learning seem to be time constraints, basic skills and access to good information.

(4) People are most comfortable learning at home or in their communities.

If local educational agencies such as schools, libraries and human service offices were more aware of these learning interests and needs, they might be able to respond to this group in an enabling way.

Overall, the people interviewed appeared to be active, independent learners, no different statistically from other populations. The findings suggest a radical rethinking of the educational enterprise as we currently know it. It also speaks to the need for public policies that recognize the inherent value of informal learning policies that bring together on equal footing the formal and informal sides of learning.

Case Study Findings. A discussion of case study findings addresses several areas: (1) Self-Directed Learners, (2) Basic Skill Development, (3) Delivery System Services, (4) PostSecondary Education, (5) Policy Implications, and (6) Further Research Directions.

Self-Directed Learners. Respondents in the study felt that the case study exercises resulted in self-revelatory experiences. A typical response to our follow-up question about what they felt about the study was, "I think it's helped me know myself better - made me think about how I solve problems and why." People became more aware of themselves as active learners and more clear about what learning goals were important to them. Such a consciousness-raising experience may be an important link to reading and serving the vast population of "underserved" or "educationally disadvantaged" populations.

Basic Skill Development. When professional educators approach clients with basic skill needs, it is important that they start from the premise that people already have skills in processing information, selecting resources and problem solving. Developed through daily encounters with problems and challenges, these competencies can be identified, built upon, and transferred to new situations, allowing adult learners to establish more control over their own lives. Thus, basic skill development would be based on assumptions of competence rather than deficiency.

Delivery System Services. While most respondents perceived no major problems in finding information and resources for their present self-directed learning efforts, it was evident that resources were not readily available for many of their projected learning goals. If given the opportunity and encouragement, many of these rural learners would enjoy expanding their horizons, discovering new interests and fulfilling old dreams. For such learning to expand beyond the boundaries and limitations of personal networks (notwithstanding the sophistication of many of these), delivery systems designed to be personal, practical and easily accessible would be helpful.

PostSecondary Education. Important questions can be raised concerning the implications of self-directed learning for postsecondary education. With the increasing number of adults re-entering formal educational systems, are these adults being perceived by admissions personnel, advisors, professors, etc., as having some experience with guiding their own learning? Are they being treated to curriculum offerings and instructional processes that take into account an adult's rich storehouse of knowledge and expertise that emerges from experiential learning efforts? Are courses and organized learning processes being offered to adults in easily accessible, economical modes of delivery? Are adult educators being trained to deal effectively with self-directed adult learners?

Policy Implications. In light of the awareness that existing programs and policies in adult learning are not reaching the bulk of learners, especially those with literacy needs, what policy reassessment needs to occur? Perhaps, as claimed by consultant, Warren Ziegler, we need to find ways to ask the supposed beneficiaries of our programs what it is they want and not overestimate our competence in determining what they need. Other policies which need to be addressed are (1) rights of self-directed learners, (2) curriculum and delivery system issues for long-distance learners, and (3) funding priorities for examining issues and concerns of underserved adult learners.

Further Research Directions. Patterns from related literature, findings and consultant critiques of this study suggest several promising research questions:

1. What is the interaction between one's self-directed approach to learning and one's cognitive style profile and one's developmental stage? Is there congruence between all three aspects?

2. What are the immediate and long-range effects of a research intervention (such as the intensive one in this stydy) on an adult learner's goals, aspirations, actions?

3. What is the nature of nonformal information networks used by adult learners for obtaining resources needed for their learning projects? Are these perceived as adequate, effective, dependable, valid?

4. What does an adult's cognitive profile suggest about effective ways of learning or delivering learning services?

5. How do adults' learning and cognitive styles compare to the format and approach of existing adult education offerings in a community? In job training?

6. What might be psychological and social obstacles to learning and development among "undereducated" or disadvantaged adults? That is, control of anger, low self-concept, fear of formal educational settings, etc.

SECTION I. TOUGH REPLICATION PHASE

Overview of Research

Until recently, most research in adult education has focused attention on the learning activity of adults in formal or educational settings. A growing body of research, however, has surfaced demonstrating the vast amount of learning undertaken by adults outside of formal classroom settings. This research has come to be referred to as self-planned or self-directed learning.

The major figure in self-planned learning of adults is Allen Tough of the Ontario Institute for Studies in Education. His seminal research begun in the early 1960's, has served as a model for subsequent research. Tough and his colleagues have further substantiated the magnitude of adult learning. As will be described below, Tough's work highlights a most important factor in adult learning: 73% of his subjects learned through self-guided means in informal settings. While these studies provide an excellent framework for the study of adult learners, very few focus on the learning activity and learning processes of adults having less than 12 years of education.

Review of Related Literature

The nature of self-planned learning, which has been thoroughly described by Tough (1967, 1971), originally started with an examination of the "learning project." Tough defines the learning project as "a series of related episodes, adding up to at least seven hours. In each episode, more than half of the person's total motivation is to gain and retain certain fairly clear knowledge and skill, or to produce some other lasting change in himself" (1979, p.6). For convenience purposes, the shortened term "learning project" has been adapted to refer to this series of related episodes which are sustained and highly deliberate.

According to Hiemstra and associates, "the primary focus of this learning projects phenomenon includes the following basic components:

1. The entire range of deliberate learning efforts - in the learning project any method can be used if the person's purpose in learning was to gain and retain certain knowledge and skills.
2. The major planner of a learning effort from one session to the next session can be the learner himself, a group, an individual, or a nonhuman resource.
3. Noncredit learning and learning for a degree or certificate is another component of the learning project.
4. Most and least common motivation for learning is another component of a learning project. In addition, various aspects related to learning projects such as resources used, obstacles to learning, subject matter, areas of the learning project, reasons for beginning and continuing the learning project, the learner planning the task, and who helped with the self-planned learning project have been explored by many researchers" (1980, pp.59-60).

Building on his earlier research efforts, Tough and associates (1971) conducted an expanded survey of learning projects with seven different populations in Toronto, Canada. These populations included: blue-collar factory workers, women and men in jobs at the lower end of the white-collar scale, beginning elementary school teachers, municipal politicians, social science professors, and upper-middle-class women with pre-school children.

Findings from this survey revealed the following:

1. Nearly everyone conducted at least one learning project during the year with some individuals reporting as many as 15 to 20. The median was 8 learning projects a year.
2. The amount of time that individuals spent on learning projects varied from 8 to 16 hours. Some individuals reported upwards of 2,000 hours spent on learning projects.
3. The most common motivation for learning was some anticipated use of the knowledge or skill.
4. The research indicated that approximately 75% of the learning projects were planned by the individual learner.
5. Findings from the survey also demonstrated that a large proportion of adults' learning projects were conducted outside of formal educational settings.

Subsequent studies using Tough's research approach have been conducted with a variety of other populations. These populations include pharmacists, secondary school teachers, lawyers, doctors, ministers, college administrators, and specific age groups. A few studies investigating the learning efforts of urban and rural adults, unemployed adults with low educational attainment and several groups of adults living in developing countries have also been completed. For comparison purposes later, only those studies which have concentrated on the rural or undereducated adult, will be reviewed below.

Armstrong (1971) investigated the learning projects among unemployed adults of low educational attainment. The Tough interview schedule was administered to a sample of 40 adults enrolled in an academic upgrading program in Toronto, Canada. Those scoring more than 300 hours were grouped as high-learners and conversely those scoring less were grouped as low educational attainment adults. The results of the study indicated that high-learners averaged 5.7 credit oriented learning projects involving some 1,340 hours during the year. Low educational attainment adults averaged 5.5 projects and spent 1,177 hours on them. For efforts having a non-credit purpose, high-learners averaged 13.9 projects and low educational attainment adults, 3.4 projects.

Johnson (1973) studied the learning projects of recent GED graduates in Florida. A random sample of 40 adults was selected. The average number of learning projects reported for all subjects interviewed was slightly more than 14. The typical respondent averaged 3.4 credit oriented projects and 10.9 non-credit learning projects. The average amount of hourly time spent for all learning projects was 876.8 hours. Sixty percent of the learning projects were self-planned and the majority were motivated by the subjects' own desire to pursue the project.

Peters and Gordon (1974) investigated the learning activity of 466 rural and urban adults living in Tennessee. About 91% reported at least one learning project during the year. The reported average was 3.9. The majority of the learning projects were job or recreational in nature and 76% were self-planned. More than one-half of the sample indicated a need for outside help at some point in their learning projects.

Field (1977) studied the learning efforts of Jamaican adults of low literacy attainment. A quasi-random sample of 86 respondents was selected from a population of adults enrolled in the national literacy program (JAMAL). The results indicated a mean of 4.2 learning projects per person. The mean length of time for each project was 142.8 hours. Most learning projects were undertaken in nonformal and informal settings such as the home or place of work. The majority of respondents focused their learning efforts on literacy, job-related, religious and home/family subject areas rather than on general education, current events and personal development. Approximately one-half of the learning efforts were undertaken in order to take some kind of practical action such as getting or improving skills for a job. About 50% of the projects were planned by a group leader with most of the remainder planned by the learner or another individual.

Johnson, et al. (1977) examined the major learning efforts of 100 unemployed adults living in New Jersey. The results of the study revealed that 86% of the sample conducted at least one learning project during the year. The range was 1 to 6 with an overall mean of 2.25 per person. The average time spent on each learning project was 36 hours. Most learning projects were personal in nature, followed by occupational and self-fulfillment. The majority of projects (85%) were non-credited oriented with the balance either for degree (5%) or certification (10%). Approximately 45% of the learning projects were self-planned. The study also revealed that people with a better attitude towards schooling tended to have a higher average number of learning projects than those with a negative attitude about school.

Umoren (1977) investigated the learning projects of adults selected from a socioeconomic group in Nebraska. A random sample of 50 was selected with 38 identified as low income people and the remaining 22 middle or high income people. Results of the study indicated an average of 4.7 learning projects per person lasting 554.5 hours. Slightly more than 40% of the projects were reported as self-planned.

Baghi (1979) explored the major learning activities of 46 students enrolled in an adult basic education program in Des Moines, Iowa. A revised version of the Tough interview schedule was utilized. Findings from the study revealed a significant number of learning projects undertaken by participants, many of which were self-planned. The reported average was 6.59 learning projects over a one-year period before the interview. Respondents spent an average of 393.91 hours in their learning. Nearly three-fifths of the projects were reported as self-planned.

Looking broadly over the findings of the preceding studies reveals little differences among and between various populations of adults. In fact, the basic picture is remarkably consistent from one group to another. According to Tough, "the really large differences are within any given population, not between populations" (1977,p.252). The findings, which have been summarized by Tough (1977) and reported by Hiemstra and associates reveal the following:

1. Ninety percent of adults conduct at least one major learning effort during the year before the interview.

2. The average learner conducts five distinct learning projects in one year.
3. The person spends an average of 100 hours per learning effort, a total of 500 hours a year.
4. Seventy-five percent of the learning projects are motivated by some anticipated use of the knowledge and skill; 20% of all learning projects are motivated by curiosity or puzzlement; 5% are motivated by credit toward a certificate, degree, etc.
5. Who plans the learning efforts are fairly standard for every study of adults finds a similar pattern, although the exact figures vary a little (1980, pp.67-68).

The preceding discussion of related literature, clearly demonstrates the magnitude of self-planned learning conducted by adults in a variety of settings. On the basis of research evidence to date, it is a fairly safe bet to assume that most everyone is in the business of learning. However, what about those adults who have less than 12 years of education and live in rural areas? This and other related questions will now be taken up in the sections which follow.

Purpose of the Tough Replication Phase

The primary purpose of the Tough Replication Phase was to investigate and describe the learning activities of rural adults having less than 12 years of education. A secondary purpose was to explore the range, content and motivations of adult learning efforts in informal settings.

The specific objectives of the Replication Phase were as follows:

1. To determine how many adults (over the age of 25) have conducted at least one major learning project within the 12 months previous to the study;

2. To determine the average number of learning projects per adult within 12 months;
3. To determine the average number of hours spent on each learning project;
4. To determine the range of motivations behind adult learning projects and frequencies within each type;
5. To determine the range and content of reported learning projects; and,
6. To determine the range and frequency of responses to who guided and who taught the learning projects.

Methodological Preparations

This section describes the procedures utilized in investigating the learning activities of rural adults having less than 12 years of education. Discussion begins with a description of the context where the study took place and the communities selected for data collection. A brief summary of the sampling technique and survey instruments employed in the study follow. The selection and training of interviewers is described along with the pilot test and resulting modifications of survey instruments. Finally, the Tough Replication is described including the interviewing process, debriefings and data analysis procedures.

The Rural Context. Orleans County occupies the western third of what Vermont's revered Senator George Aiken has called "The Northeast Kingdom". A "kingdom unto itself", this area is comprised of Vermont's three northeasternmost counties. Social indicators for this area accent its unique isolation as well as its typically rural characteristics.

In addition to Orleans, Essex and Caledonia are the counties commonly treated as comprising the Northeast Kingdom. Although the three county region comprises 21.5% of the state's land area, just one in ten Vermonters lived in the area in 1980. And on yet another dimension of rurality, the population density factor, this Northeast Kingdom displays just 17.9 persons per square mile in 1980, compared to a state average of 62.5.

While the region appears "rural" as described by these traditional measures of sparse population distribution, it also portrays many of the less desirable social and economic indices which characterize many of America's forgotten rural areas.

In terms of health indicators, for example, distribution of physicians in the Northeast Kingdom amount to just 89.6 per 100,000, compared to 207 at a state level. Northeast Kingdom physician rates are less than one half the national rate of 167.4 physicians per 100,000 population. A second standard measure of quality health service is the availability of hospital beds. Here again, low quality of health care is suggested by the low hospital beds per 100,000 people for this region, totaling just 343.3 in 1975, less than half the rate for the balance of Vermont. However, the most telling indicators of rural life quality are economic. 1970 median family income in the Northeast Kingdom counties ranged from $7,302 to $7,714. The region-wide average of $7,538 is a full $1,000 below the state's median family income. Or in a proportionate sense, families in the Northeast Kingdom enjoy just over three-quarters of the national median family income, $9,586. 1970 data also show that some 12.6% of the Northeast Kingdom families lie below the poverty level. So too, all three of these counties consistently appear among those counties in New England with high rates of unemployment.

And, finally, in the area of demographics for this particular project, we were particularly interested in age and sex distributions, and levels of educational attainment. All three counties rank well above state and national averages in the percent of their population over 65, a typically rural characteristic. Two of the three Northeast Kingdom's counties, Essex and Orleans, have close to one-third of their 1970 inhabitants as either first or second generation Americas. The overwhelming percent of these (91.1% and 89.3% respectively) hail from Canada. Undoubtedly associated with this large percentage of foreign stock (twice the national average), is the fact that adults in the two Northeast Kingdom counties of Essex and Orleans are characterized by the lowest school years completed median in the state (10.3 and 11.0 respectively). (The state median years of school completed for these persons 25 years and older stood at 12.2 in 1970.)

All of these indicators emphasize the fact that the Northeast Kingdom is a unique area. And yet these very indicators of uniqueness depict patterns common to many rural areas: low population densities, isolation, low family incomes, high unemployment, "pocketed" foreign stock, high proportions of elderly population, and low levels of formal education.

Having examined the three counties which constitute this region, project researchers decided to focus attention upon the northern and westernmost county, Orleans. Orleans County was selected because its core of communities appeared to be representative of major demographic and economic patterns in the Northeast Kingdom. Most communities in Orleans County have sufficient size to enjoy a degree of social solidarity as well as basic economic services. And yet, they are not so large so as to have lost the attributes of small places. Moreover, the central communities of area are least influenced by the ski and recreation industry so rapidly expanding in northern Vermont. Finally, and on a most practical level, Orleans County communities were selected as a focus for this study because they lie within commuting range for project researchers located at the University in Burlington (albeit a commute which turned out record round trip times of three-and-a-half hours).

Community Selection. Orleans County is composed of 18 towns and one city. These minor civil divisions have political autonomy characterized by annual town meetings and citizen government. (There is no county government in Vermont.) Moreover, each of the 19 units hold in common the attribute of mutual exclusivity. Thus, when summed, the nineteen total the entire population, land and water area of the county. Conceptually below Vermont's minor civil divisions, the only formal sub-units are an occasional incorporated village. These village units (six in Orleans County) are constituted legally with varying degrees of local autonomy. However, for purposes of this study, they were treated as population clusters lying within the jurisdiction of the towns which encompass them.

Community selection focused first upon the construction of a pool of communities with characteristics appropriate to the objectives of the study. At the outset, the construction of this pool involved elimination of places with characteristics inappropriate to a rural setting. Thus, from our "pool" (see Table 1), the city of Newport was dropped immediately on the grounds that its population density is more characteristic of an urban area than that of a rural community. In an attempt to assess the influence of urban Newport City upon its immediate neighbor and largest suburb, Newport town, a scale of essential services (gas station, general store, library, jeweler, etc.) was constructed. Newport town was found to be dependent upon the city for many of these essential services. Newport town was dropped from the community pool.

The next diemnsion explored was that of population dispersal. While it was felt that towns with significant open country and under-educated adults were desirable in the study, too much distance between interviewing sites (households) promised to be both time-consuming and expensive. Population densities under ten persons per square mile were examined. Two towns, Jay and Westmore appeared. Jay was dropped because of its small population, low density. (Subsequent investigation showed that Jay is disproportionately affluent and well educated, has only an insignificant French population, and

Table 1

Initial Pool of Orleans County Communities, Square Milage and Density

Place (Towns)	Sq. Mileage	Preliminary 1980 Population	1970 Population	1980 Density
Albany	36.00	700	528	19.44
Barton	38.47	2,992	2,874	77.77
Brownington	25.92	705	522	27.20
Charleston	31.99	862	654	26.95
Coventry	25.04	671	492	26.80
Craftsbury	35.25	842	632	23.89
Derby	44.77	4,220	3,252	94.26
Glover	33.66	842	649	25.01
Greensboro	33.23	676	593	20.34
Holland	36.00	474	383	20.75
Irasburg	35.15	874	775	24.86
Jay	36.00	301	182	8.36
Lowell	52.16	573	515	10.99
Morgan	28.77	472	286	16.41
Newport City	7.87	4,768	4,664	605.84
Newport	36.00	1,310	1,125	36.39
Troy	35.34	1,494	1,457	42.28
Westfield	33.44	419	375	12.53
Westmore	31.39	260	195	8.28
Total	636.45	23,455	20,153	36.85

a highly professional labor force.) Westmore fell out of the pool because of its small population, low density, large open country population, and low score on the essential services scale. All of these indicators suggest a low solidarity, very dispersed population base. At this point, the pool numbered fifteen communities.

In employing the next set of criteria for community pool construction, the characteristics of the ideal respondent were considered. Here, selection was designed to come as close as possible to enhance the likelihood of interviewers finding an equal proportion of male and female respondents. In addition, a representative distribution of adults with a range of educational attainment was sought. In Holland, just 18.3% of the adults had under a 9th grade education in 1970, compared to a county-wide community average of 37.5%. Similarly, it was found that Holland had a grossly disproportionate ratio of undereducated males to females. Furthermore, examination of the ratio of very old to the balance of the adult population showed that Derby had a county high of 43.9% of its adult population over 65. Holland and Derby were dropped. This brought the pool to thirteen communities.

Subsequent examination found no other extreme distributions on age, sex and male/female education ratios. With the pool standing at thirteen communities, four were randomly selected. They included: Barton Town (including Orleans village), Lowell, Albany and Troy towns. In addition, the town of Irasburg was randomly selected for pilot test purposes.

Sampling. The population of this study consisted of two groups of adults 25 years and older living in Orleans County, Vermont. The first group included all adults living in the four communities described above. Total 1977 estimated population figures for these communities was 5,588. The second group consisted of all adults enrolled in the county-wide Adult Basic Education (ABE) program. The total ABE population numbered 326.

A stratified random sample was selected in the four Orleans County towns of Barton, Lowell, Albany and Troy. An equal number of males and females was selected in each town. The total number selected was 61. Emergency Medical Service (EMS) maps of Orleans County were utilized to select sample subjects. These maps were very detailed and provided the most up-to-date information available.

In addition, a random sample stratified according to age and sex was drawn from the population of identified ABE adults. The total sample numbered 32.

A random list of numbers was employed to select each group. To ensure sufficient sample numbers in the event of refusals, a subject-pool twice the final amount needed was drawn and ranked by order of selection. Substitutes were added as needed from the list.

Selection and Training of Interviewers. In order to collect data on the learning activities of rural adults living in Orleans County, twenty individuals were recruited to serve as project interviewers. These individuals were selected principally on the basis of their communication and human relations skills. Previous interviewing experience was desirable but not necessary. Also, because a large percentage of the Orleans County population is French-Canadian, four interviewers were required to be bilingual.

Following selection of the project interviewers, two explanatory meetings were organized to discuss the nature and purpose of the study. Interviewers then received training in interviewing techniques so that all questioning would be as uniform as possible. In addition, a day-long training session under the direction of Allen Tough was held to familiarize interviewers with the interviewing process and instruments used to collect data. Interviewers practiced with each other, and in some cases, utilized the videotape recorder for direct feedback purposes. Every effort was made to "standardize" the interviewing process as much as possible to increase internal validity.

The final set of training exercises involved a pilot test in the Orleans County town of Irasburg, Vermont. This town was selected on the basis of its similarity with the four towns identified for full-scale interviewing. The pilot test offered interviewers the chance to gain direct experience with all facets of the interviewing process and helped researchers perfect the data collection instruments. It will be described in greater detail in the section entitled "Pilot Test/Modifications of Instrumentation."

Survey Instruments

The survey instruments consisted of three parts: 1) an interview schedule; 2) a demographic questionnaire; and 3) an interviewer reaction sheet.

A revised version of Allen Tough's (1971) interview schedule was used to collect data relating to learning projects attempted during the previous year. The interview concentrated on discovering the extent of deliberate learning, the amount of time spent on this learning, and the primary motivation behind each learning effort. The main planning and teaching source were also collected.

In addition, basic demographic data relating to such things as sex, age, educational background, occupation and annual income were collected.

The third part of the survey instrument was devoted to interviewers' reactions to the interviewing experience. Here, interviewers were asked to subjectively describe the initial reception, how long the interview took place, and rate how interested each participant was at the beginning and end of the interview. This plus all other data were recorded directly on each survey instrument. (See Appendix A for a copy of the instrument).

Pilot Test/Modification of Instrumentation

As a means of testing out the survey instruments and to provide interviewers with direct field experience, a pilot test was organized and run in the Orleans County town of Irasburg, Vermont. This town was selected because of its sociological similarities with the four towns identified for full-scale interviewing.

A random sample stratified according to sex was drawn from the Irasburg population. Twenty-eight adults, 25 years and older were selected. Names from this sample were recorded on a State of Vermont road map of the town. This was done to enable interviewers to find their way around Irasburg and locate sample subjects.

Actual interviewing was held on a Saturday in late October 1979. The town clerk's office was used as a base of operation. Interviewers were dressed in casual attire and possessed University of Vermont identification badges. In some cases, phone calls were made in advance to prospective subjects, and in other cases, unannounced visits were employed. Each of the 14 interviewers conducted a minimum of two interviews lasting on the average of 1½ hours in length.

Commensurate with the pilot study in Irasburg, a similar trial run was conducted with a random sample of adults enrolled in the Orleans County Adult Basic Education Program. Twelve adults were interviewed by the six ABE tutors identified for interviewing. Similar procedures as those noted above were employed.

Following completion of the pilot test, interviewers were asked to give their reactions to the data collection instruments and the interviewing process. The reactions were generally favorable although a few interview items were modified for clarity purposes. In the case where gender was used, it was modified to reflect a neutral perspective.

The final set of modifications entailed the way data were recorded. The tape recorder was found to be unnecessary and categories on each instrument improved. In some cases, additional space for subjective comments was added.

Procedures

Interviewing Process. Once the pilot test had been conducted and each data instrument modified accordingly, the next phase of the project involved full-scale interviewing in the four towns noted earlier. The first week in December of 1979 was selected as the best time for this activity. Arrangements were made with a local motel for food and overnight accomodations: it too served as a base of operations. Interviewers arrived on a staggered schedule with some coming on Wednesday and staying through Friday and others on Thursday and staying through Saturday. Both day and early evenings were selected as the best times for interviewing to take place. Every effort was made to contact selected subjects in advance so as to set up a convenient time for each interview. In the cases where subjects could not be reached or had no listed phone number, direct visits were made.

The actual interviews generally took place at subjects' home or place of business and followed a prescribed pattern. At the outset, interviewers explained the purpose of the study and commented on its possible uses. Subjects were then asked to sign a release form, giving permission for the interview and ensuring confidentiality. Once a relaxed atmosphere had been established, the interview proceeded. The initial task of the inquiry was to help subjects recall any learning projects that they had done or were in the process of doing. This generally was the most difficult part of the interview since most subjects defined learning as only occurring in school or institutional settings. As a result, most were surprised that they had engaged in so much learning during the previous year.

After an inventory of learning projects had been established, additional questions focused on the amount of time spent, the degree of satisfaction with the learning, the motivation behind each learning effort, and who planned and taught the learning project. A series of clarifying and demographic questions followed. These questions concentrated on where did most learning occur, what method of learning was most preferred and were there any obstacles or barriers encountered during the learning projects. The average amount of time spent on the interviews was 1½ hours.

Debriefings. Following completion of the interview phase, several debriefing sessions were held with the interviewers. The purpose of these sessions was to help researchers better understand the rich data collected. Interviewers were asked to evaluate the instrumentation used and the interviewing process. These comments proved to be extremely helpful in analyzing the data and preparing for the case study phase of the project.

Data Analysis. Data were analyzed at two levels. At the first level, a data analysis sheet was developed which served as a coding device. Data were recorded on International Business Machines (IBM) general-purpose answer sheets. The data were then transferred to computer files and using the Statistical Package for the Social Sciences (SPSS) computer program, simple frequencies and cross-tabulations were run.

At a second level, content analysis procedures were administered to the qualitative data collected. Using some pre-determined rules of analysis (see Appendix L), the data were broken down into units of analysis through a logical categorization of concepts and images. Then, findings were analyzed across subjects by identification of similar and divergent themes.

Findings

This section describes the findings of the Tough Replication. Discussion begins with a presentation of interview responses. A description of the sample broken down by selected demographic characteristics follows. Discussion then shifts to a presentation of the number and type of learning projects, hours spent, primary motivation for learning, and who or what helped guide/teach the learning efforts. The section concludes with a brief summary of the themes running through interviewers' reflections.

Interview Responses. A total of 93 interviews were conducted. Of this number, 61 were conducted with adults living in the four Orleans County towns of Albany, Barton, Lowell and Troy, Vermont. The remaining 32 were conducted with adults enrolled in the county-wide Adult Basic Education Program. For reporting purposes, the first group was referred to as NON-ABE and the second as ABE. All interviews were considered valid and were used for data analysis.

Table 2 reports the distribution and percentage of interviews conducted with the total sample and subsamples of ABE and NON-ABE adults living in Orleans County.

Table 2

Distribution and percentage of interviews conducted with ABE and non-ABE adults

Group	Number	Percentage
NON-ABE	61	66
ABE	32	34
TOTAL	93	100

Distribution of Demographic Characteristics. Adults interviewed as part of the Tough Replication were classified according to selected demographic characteristics. Participants were asked to indicate their sex, age, years of education, parents educational background, gross annual income, marital status, language background and occupational status. Table 3 (p. 23) summarizes these characteristics for the total sample and subsamples of ABE and NON-ABE adults.

It is interesting to note that with the exception of sex, years of education, parents educational background and occupational status, the demographic profiles are very similar. In the case of sex, this discrepancy is explained by the fact that the ABE popu-

Table 3

Distribution of demographic characteristics of total sample and subsamples

Descriptors	ABE	NON-ABE	ALL
N =	32	61	93 (32 ABE 61 non-ABE)
Females	75% (n=24)	56% (n=34)	62% (n=58)
Males	25% (n=8)	44% (n=27)	38% (n=35)
Average Age	43 years old (range 25-75)	49 years old (range 25-84)	47 years old (range 25-84)
Average number years of education	8.3	11.3	10.3
Educational background	94% had less than 12 years of education	39% had less than 12 years of education	58% had less than 12 years of education
Parents' educational background	22% reported fathers completing 8 years of education; 44% reported mothers completing 8 years of education	36% reported fathers completing 8 years of education; 26% reported mothers completing 8 years of education	63% reported mothers and fathers completing only 8 years of education
Income	47% reported less than $10,000; 31% reported between $10,000-$19,999	39% reported less than $10,000; 41% reported between $10,000-$19,999	42% reported less than $10,000; 38% reported between $10,000-$19,999
Marital status	78% married	77% married	77% married
Language	16% claimed to be bilingual (French and English); 44% said one or both parents were bilingual	30% claimed to be bilingual (French and English); 48% said one or both parents were bilingual	about ¼ claimed to be bilingual (French and English); about ½ said one or both parents were bilingual
Occupations	41% housewives; 13% service workers; 13% retired; 3% self-employed; 3% farmers	23% housewives; 3% service workers; 23% retired; 15% self-employed; 10% farmers	29% housewives; 5% service workers; 19% retired; 11% self-employed; 8% farmers

lation in Orleans County has approximately three times as many females enrolled in the program as it does males. Thus, the stratified random sample reflected this make-up.

Regarding personal educational background, this difference is somewhat self-explanatory. As a general rule, adults who enroll in Adult Basic Education programs do so to acquire basic literacy skills and typically have fewer years of education. The general population, on the other hand, typically has a higher average years of education due largely to compulsory elementary and secondary education. In short, the samples reflect typicality.

As for the variance in parents educational background, this may be explained by the fact that often mothers of lower educated individuals typically have more years of education than their spouses. The educational background of parents of the NON-ABE sample appears to confirm this tendency. It is interesting to note, however, that approximately two-thirds of both subsamples reported only eight years of education for their parents.

The differences in occupational status between the two subsamples may be more a reflection of educational background than anything else. Here, a significantly greater percentage of NON-ABE adults reported themselves as being self-employed (15%) as compared to ABE adults (3%). This was also the case of those reporting themselves as farmers. On the other hand, a significantly higher proportion of ABE adults characterized themselves as being service workers (13%) than did NON-ABE adults (2%).

Inferences drawn from the above findings should be treated with caution since a number of plausible rival explanations could exist.

The discrepancies in sample size and make-up should also be considered when interpreting the results.

Learning Projects. Learning projects refer to highly deliberate efforts to gain and retain certain definite knowledge and skill that occur over a specified period of time. Excluded from this definition is learning that occurs in an incidental or unplanned manner such as a casual conversation with a friend or reading a book for recreational purposes. Also, excluded is learning that results from normal developmental changes within the individual or environmental influences (Tough, 1971).

With the above definition in mind, 98% of the entire sample reported at least one major learning project. The overall average for the total sample was 4 distinct learning projects per individual with the ABE subsample averaging slightly more projects (4.3) than the non-ABE subsample (3.8). The range of learning projects for the total sample was 1 to 14. This average of approximately 4 learning projects per year per individual is consistent with findings of previous studies utilizing the Tough interview format.

Looking at the learning projects data in more detail, revealed that approximately 20% of the entire sample reported conducting six or more learning projects per year. As a group, ABE subjects more frequently conducted six or more learning projects than did non-ABE subjects. However, when analyzed by years of education, rather than by group, those individuals with 12 or more years of education reported six or more learning projects more frequently (26% of the total sample) than did individuals having less than 12 years of education (14%). This suggests that ABE subjects were more heavily represented in the undereducated percentage conducting six or more learning projects.

Moreover, while the entire subsample of ABE subjects reported at least one learning project, this was not the case with subjects from the non-ABE subsample. Two individuals from this group reported no learning project activity. These two individuals were males and both had more than 12 years of education. The discrepancy here may be more a function of sample size than anything else.

In addition, sex does not appear to be a discriminating factor when comparing the mean number of learning projects. However, when looking at those individuals who conducted six or more projects, women were nearly twice as active as men. This finding should be treated with caution, however, since the total sample had nearly twice as many women as men. The reason that the sample was skewed toward females is explained by the fact that the sampling procedure used to identify ABE subjects was stratified according to proportion of sex -- that is, females represented 80% of that population. Whereas, a random selection was used in the non-ABE sample, and this resulted in a fairly equal sampling profile (44% males, 56% females).

The age of sample subjects does not appear to be a discriminant variable of self-planned learning efforts either. While persons less than 39 years of age reported 6 or more learning projects more frequently than other age groupings, the difference was insignificant. It is interesting to note, however, that nobody over 65 years of age reported 6 or more learning projects. Yet, this age group reported learning activity comparable to the other two age groupings (less than 39 and 40-65) in the three to four projects per year.

In the area of educational background, some subtle differences appear. People with less than 12 years of education and those with only a high school degree look very similar in numbers of learning projects. Those with education beyond high school tend to have been involved in more learning and in more varieties of learning efforts than those with lesser education. It is important to point out, however, that these differences are very slight.

Results consistent with previous Tough replications were also obtained regarding the amount of time spent on each learning project. Overall, the average learning project consumed about 106 hours or more than 400 hours during the year. Regardless of application, this finding suggests a significant amount of time spent learning new knowledge and/or skill.

The types or kinds of learning projects were equally wide and varied, ranging across 15 distinct categories. Table 4 presents these categories broken down by frequency and percentage. It is interesting to note that the two most frequent types of learning projects were 1) Arts and Crafts, and 2) Structured Learning (each with 22%). "Home/Farm Improvement" was the third most frequent category (14%) followed by "Job/Career" (11%). The remaining categories were fairly evenly distributed averaging roughly the same percentage.

Table 4

Learning Project Categories Ranked by Frequency and Percentage

Category	Frequency	Percent
1. Arts and Crafts	79	22
2. Structured Learning	78	22
3. Home/Farm Improvement	50	14
4. Job/Career	39	12
5. Personal (Physical/Attitudinal Change)	17	5
6. National/International Affairs	17	5
7. Nature	9	3
8. Medical	10	3
9. Family Relationships	11	3
10. Civic Activities	10	3
11. Recreation	8	2
12. Financial	8	2
13. Religious Awareness	7	2
14. Structured Teaching	5	1
15. Social Relationships	3	1
TOTALS	351	100

The most frequently stated motivation across all learning projects was "general interest" (28%). A close second was "to improve basic living skills" (25%) followed by "to work towards a degree or certificate" (9%). This finding is interesting in light of most formal needs assessments which typically reveal a much stronger motivation for degrees or certificates than for general interest.

Regarding who guided or planned the learning project, about one-half of the efforts were self-planned. A little more than one-quarter were cited as planned or guided on a one-to-one basis by either a professional (15%) or a friend or peer (12%). Very few projects were guided by a group led by professionals (8%) or peers (1%). About 9% of the learning projects were reported as guided or planned by a mixture of the above categories. For example, this mixture included a combination of peers, friends, professionals, books, magazines and T.V. The finding that only half of the learning projects were self-planned is significantly lower than previous studies on self-planned learning (e.g., Tough found 3/4 being self-planned). This discrepancy, however, is explained by the fact that the Adult Basic Education program in Vermont utilizes a home tutoring system which would be considered professionally guided. This means that a disproportionate number of learning projects conducted by the ABE subsample should have been professionally guided, which they were. By controlling for this confounding variable, the number of self-planned learning projects increased to consistent proportions with previous Tough research (71%).

In addition to who planned or guided the learning project, subjects were asked to indicate who or what was the main teaching source for their learning. The most frequently cited resource was the "Mixed" category (37%). "Self" was the second most frequently cited resource (21%), followed by "Professional/expert on a one-to-one basis" (15%). The fourth most frequent category was "Object" (11%), i.e., books, magazines and /or T.V. When the two categories, "Self" and "Mixed" were combined for the Who Guided? and Who Taught? questions, the combined percentages were roughly the same (61%). However, if one looks at the individual categories across these two questions, we note that in the Who Guided question "Self" is reported twice as often as it is in the Who Taught question. Whereas, if one looks at the "Mixed" category for these two questions, we note that it is reported nearly four times more often in the Who Taught? (37%) than in the Who Guided? (9%). This suggests that there is a great deal of self-planned learning going on taught by a variety of resources.

Of the 353 learning projects identified, a little more than 2/3 of them (69%) were reported as still active. Conversely, the reamining 21% were reported as being not active. Further, 69% of the total sample indicated that they were very satisfied with their learning as opposed to 5% who weren't. Similar results were reported for degree of learning (72% very much, 2.5% very little) and for benefit to others (58% very much, 10% very little).

In addition to the Tough interview protocol, questions were asked regarding ways people learn best and places where most learning occurs. The preferred methods of learning were: (in descending order) learning by doing (56%), talking and listening to others (19%), reading (12%), other (5%), observing others (4%), and watching T.V./listening to the radio (3%). The overwhelming choice of where most learning takes place was in the home (69%) followed by on the farm (9%) and at one's place of employment (8%). The place where many educators believe most learning takes place -- in the classroom -- was selected by only 7% of the total sample. Findings such as these raise serious questions about the current programming efforts of many educational institutions. The implications are no less dramatic.

When considering the total sample, the major problem or obstacle encountered by subjects when undertaking their learning projects was time (N=19). Also frequently reported were basic skill problems (N=17), lack of resources/information/materials (N=15), financial constraints (N=12), and unsupportive family environment (N=11). Contrary to findings of many formal needs assessments, transportation was cited as a relatively minor problem (N=7).

Looked at in total, the above figures demonstrate an impressive amount of deliberate learning that is active and highly satisfactory. As a general rule, subjects undertook learning projects on an individual basis or with the help of mixed resources to study matters of personal concern. A similar pattern emerged when subjects were asked to indicate what new learning efforts would be planned for the future. The most frequently cited category was hobby/craft/recreational/travel (27%) followed by further education/career goals (21%), basic skill development (15%), and technical skill development (14%). This pattern emerged once again when subjects were asked to list any teaching efforts they had done to help others learn. Here, as before, the hobbies and crafts category was overwhelmingly brought up by a 2 to 1 margin. It is interesting to note the latency between actual learning projects which have an avocational focus and future learning projects having this same focus plus an occupational bent.

Interviewers' Reactions

Following each interview, interviewers were asked to complete a specially designed reaction sheet. This sheet was intended to draw out reflections of the interviewer's experiences. A content analysis was conducted to determine similar and divergent themes running through the recorded comments.

Based on the content analysis, the following themes emerged:

1. Women tended to be more shy than men.
2. The T.V. was on most of the time ven if no-one was watching.
3. Respondents tended to say if anything came up, they'd simply learn how to deal with it.
4. Many subjects stressed that the days didn't change much.
5. Nearly everyone appeared very self-sufficient in their general life styles.

6. There was a great deal of warmth and caring exhibited by the respondents.
7. Subjects felt that they were learning something new everyday, but didn't think about measuring it.
8. Respondents were for the most part optimists. A typical quote heard repeatedly was, "It doesn't pay to be gloomy."
9. Many subjects stated that the interview helped them realize all that they had done and learned during the previous year.
10. A majority of respondents indicated that schooling "turned them off."

The above themes were rich and varied and helped the researchers prepare for the case study phase. For the most part, the themes suggested positive interventions and a profile of active independent learners. They provided clues for further exploration concerning the natural competencies possessed by these learners. In large measure, the themes from these reflections established a contextual base for understanding rural adult learners, thus providing a useful bridge to the next phase.

Discussion.

The Tough Replication phase clearly demonstrates that among the sample of little educated rural adults, there was an impressive amount of purposeful learning underway. Ninety-eight percent of the sample reported at least one major learning project involving 7 or more hours of time. The overall average was 4 distinct learning projects per individual, with some respondents reporting as many as 14 during the previous year. There was no significant difference in terms of average numbers of learning projects between the ABE and non-ABE subsamples. Many projects involved multiple episodes and covered a rainbow of topics. The average time spent on each learning project was 106 hours or more than 400 hours over the entire year. These findings support results of other Tough replications with a wide variety of populations, and suggest that geographical and educational background are poor predictors of learning activity, particularly when conducted on an independent basis. As Coolican has stated, "It appears the major question is no longer participation vs. nonparticipation. Almost everyone undertakes learning projects to some degree" (1974, p.13).

The demographic variables of sex and age do not appear to be discriminating variables of learning projects activity. There were, however, some subtle differences in the area of educational background. Those subjects with education beyond high school tended to report more and varied learning projects than those subjects having a high school degree or less. This difference, however, was very slight, and could be attributed to sampling error.

In the area of motivation, the majority of learning projects appeared to grow out of a practical, recreational or immediate need. For example, if the heating system or car needed to be repaired, a deliberate effort was made to learn how to resolve the problem. This finding may suggest that many learning projects are situationally bound and dependent on an individual's mental, physical and/or financial condition. In short, deliberate learning may arise as much out of a given situation as a brainstorm, latent goal or intuition. The case study phase sought to explore this area of inquiry further.

The resources that respondents tended to use were a combination of sources. Neighbors and relatives were the most common human resources. Books, magazines and the T.V. were the main material resources. Learning by doing and talking and listening to others were the most preferred methods of learning. The overwhelming location where most learning occurred was in the house or on the farm. Findings such as these are not surprising given the fact that nearly three-quarters of the learning projects were reported as self-planned.

Of little surprise too was the finding that most of the learning projects were non-credit in nature. In fact, less than 10 percent were credit bearing activities. For many people, there is little motivation to engage in credit-oriented learning. The payoff for them is the content or subject matter and not one, two, or three credits. The learning projects reported by the sample of little educated rural adults, typically grew out of an intuitive desire or direct need, and would have likely occurred anyway. Also, most of the respondents indicated high satisfaction with the learning projects they conducted. This may be due in part to the independence used in planning, guiding and carrying out the learning efforts. As Johnson et al have stated, "If this is the case, then there may be lessons for other programs contained within the experiences of the sample surveyed" (1977, p.352).

There are also many obstacles or barriers to successful completion of learning projects. It is hard to gauge if outside help would have enabled or inhibited the learning process since there was no way to measure the quality of the projects. Yet, when asked if they ran into problems or obstacles with their learning projects, the majority of respondents indicated "yes." The most frequent types of problems were time and basic skills. This finding is not surprising, given the large number of Adult Basic Education subjects interviewed in the study. The cost factor, usually frequently reported in formal needs assessments, was mentioned by a small minority. Of great concern to sample subjects, was the need for greater knowledge and information in doing their learning projects. Many respondents indicated that they did not always know where to go for information or help. If local agencies such as schools, libraries, and human service offices were aware of this need, they might be able to respond to this group in an enabling way. The problem, however, is that many educators, counselors, and human service workers do not acknowledge nor probe for learning projects. This issue is an important one and needs to be addressed in further research.

The findings from the Tough Replication phase provide ample evidence to support the contention that the United States is indeed a "Learning Society." And, it is clear that little educated rural adults are part of what Moses (1970) has called the "learning force." The people interviewed appeared to be active, independent learners, no different statistically than other populations. Yet, are there any glaring differences? This question is difficult to answer since the Tough interview focused more on quantity issues surrounding learning projects and less on quality issues. On the surface, the answer would have to be no. These people appeared to be curious, caring individuals, just like everyone else. Many were involved in their local communities, conducting learning projects to make a better place for all. Some looked nationally and internationally for answers beyond their grasp. A few even looked introspectively, hoping to better understand themselves as human beings. If any differences do emerge, they reside more in the types of learning projects and the processes employed to carry them out, and less in the statistical averages. As Tough has stated, "The basic picture is remarkably consistent from one population to another. The numbers change a little, but the general pattern remains constant. In fact, really large differences are within any given population, not between populations (1978, p.252). Our findings support this conclusion.

The implications of this phase of the project are far-reaching. The findings suggest a radical rethinking of the educational enterprise as we currently know it. This study (plus other Tough replications) raises significant questions about the teaching and learning of adults, particularly as self-directed learners. It suggests the need for new paradigms not yet invented. Finally, it speaks to the need for public policies that recognize the inherent value of informal learning: policies that bring together on equal footing the formal and informal sides of learning.

Section II. CASE STUDY PHASE

> If I want to understand(sic) an individual human being, I must lay aside all scientific knowledge of the average man and discard all theories in order to adopt a completely new and unprejudiced attitude. (Carl Jung, 1957 The Undiscovered Self, p.18).

Rationale for Qualitative Approach

In order to examine in depth the learning processes of rural adults who had previously demonstrated self-directed learning, we chose case study methodology which can be described as a qualitative or naturalistic form of inquiry.

More specifically, the naturalistic approach was chosen for several reasons. First, it was important to use a mode of inquiry that was consonant with the examination of a new domain of knowledge; i.e., the natural processes used by little educated adults in their self-directed learning efforts. Also, the exploratory nature of naturalistic research appeared to fit better than more conventional, hypothesis-testing modes of inquiry.

Second, it was important to utilize a mode of inquiry that would be responsive to the participants and their environment; something that would allow for one-to-one contact which was secure, open and facilitating. Again, the personal and humane aspects of naturalistic inquiry seemed to fit.

A third and perhaps foremost reason for selecting this approach was our commitment to the philosophical and theoretical roots of naturalistic inquiry. These roots could be called phenomenology, discovery and expansion (vs. positivism, verification and reductionism). As stated by Bogdan and Taylor (1975),

> The phenomenologist is concerned with understanding human behavior from the actor's own frame of reference...The phenomenologist examines how the world is experienced. For him or her the important reality is what people imagine it to be.

It was thus felt that a naturalistic approach would best communicate our intentions to rural adult learners in helping them describe to us their own realities.

Methodologies associated with Naturalistic Inquiry have been called ethnography, participant observation, document analysis, case study and other emerging techniques such as literary and art criticism and investigative journalism. Naturalistic Inquiry is not a one dimensional approach, necessitating the use of a specific technique. There are researchers, of course, who have spent many years developing their skills in particular methodologies and specialize in using them within field settings. One example would be Participant Observation which is a highly developed, very sophisticated tool with defined rules and procedures for collecting very rich, intricate data. However, the other techniques mentioned previously are also very useful, very appropriate and very acceptable for attempting to understand people and their actions in as natural a way as possible.

Egon Guba (1978) makes the point that the degree to which a study is naturalistic is determined by what an investigator does, not the nature or posture of subjects or the situation. Thus, it is in the process of choosing a design and one or more techniques that particularly match one's research objectives and the particular setting that one comes to appreciate what Naturalistic Inquiry means.

The following section will address such decisions surrounding the design of the case study framework in light of several methodological considerations, including: (1) The research goals and motives, (2) The context in which these get played out, and (3) The respondents who will become involved.

Case Study Design

> Natural inquiry is no less rigorous than traditional experimental research, it is simply different. (Wolf and Timitz, 1976-77)

Methodological Considerations. The first consideration in designing this phase was to become very clear about the goals and motives for this second phase of the study. From the first phase, using Tough's Learning Projects protocol, we had found that this sample of rural adults looked quite similar to the many other adult populations studied previously. Even though they averaged only 10.3 years of education, and the majority reported less than $10,000 income, they averaged 4 learning projects per year with an average of 106 hours per learning effort. The question that is raised by these findings is how do they do this and why? Thus, a natural next step was to focus in more depth on the learning processes and motivations embedded in these facts.

From another perspective, we also clarified our own motivations and desires for an end product which would not only expand the knowledge of self-directed learning of adults but also expand the horizons and understandings of qualitative and

and naturalistic methodologies.

A third consideration revolved around the respondents. In order to accomplish in-depth, longitudinal case studies, the number of respondents needed to be reasonable. It was also important to have representativeness in sex, age and educational background in order to do some comparative analysis. Respondents needed to be willing to enter into a time-consuming and basically unknown experience. More importantly, we intended to operationalize a philosophical commitment to participatory research. To treat each subject as a partner in the research process made sense not only because of its consistency with the philosophical underpinnings of naturalistic inquiry, but also because of its practical utility. In order to get at people's experience of learning when this is not necessarily associated with formal structures, we needed to enter into a dialogical relationship with the respondents, where meanings could get clarified and the accuracy of what was perceived could get checked out. We felt that this clarifying and probing of meanings can best happen through an honest and open dialogical process.

With these philosophical and operational considerations in mind, several procedural and design decisions followed. First, we decided that the core of the case study data collection would be a semi-structured, conversational interview format. This would allow for the in-depth investigation of the content focus of the study; i.e., understanding the processes of self-directed adult learning. Also, it would provide a common and consistent framework for the three researchers involved in data collection. A commitment was made to be as casual and conversational as possible, following participants' responses in directions they seemed to want to go.

Several other procedural decisions were made after consulting with several case study experts, notably Dr. Robert Stake, Director of CIRCE at the University of Illinois in Champaign, Illinois. These decisions were:

1. Each case study will focus on a person as a single, unique unit.
2. Each subject will be viewed and treated as a co-investigator, in partnership with the interviewers.
3. The same interview protocols will be used with all co-investigators.
4. Interviews will be conducted in a conversational style, within the respondents' home or other comfortable setting. Interviewers will attempt to establish rapport and maintain informality throughout the study.
5. Responses of co-investigators will be probed for clarity and depth of meaning.
6. Interviewers will document additional informal conversation before, during and after the interviews.
7. Interviewers will document context-related data relative to the respondents such as home environment, family interactions, and personal body language.
8. Responses to questions will be documented by interviewers through written notes as well as audio tape (unless deemed inappropriate).
9. After each interview session, the interviewers will gather to discuss perceptions, difficulties and next steps.
10. The individual case study write-ups will follow a similar format and include similar data.
11. References to questions and interviewers' interpretations of responses will not be included in the case study write-ups.
12. Themes and perspectives across the case studies will be identified and analyzed by several people within and without the project. Commonly agreed upon themes will form the basis for interjudge reliability.

Case Study Framework. A conceptual framework for research is an attempt to give the study a firm foundation in theory which then frames the research design and process. According to Wilson, et al (1980), theory, as a systematic view of reality, is developed from (1) a set of assumptions about a certain reality, (2) a set of central concepts which specify and explain the theory domain, (3) propositions or explanations of the relationships between the variables, (4) conjectures or universal propositions arising out of the theory and (5) hypothesis which specify what should be found if the conjectures are true. However, because there is yet no adult learning theory with which to test conjectures and hypothesis, we opted to construct an exploratory research approach which still had some focus and conceptual structure. We wanted a purposive structure which had a holistic perspective, encompassing several knowledge bases related to adult learning. By doing so, we hoped to discover ways to integrate the different knowledge bases and offer some possible propositions about their interrelationships. Thus, the generation of theory, rather than the testing of theory becomes the desired end. (Schatzman and Strauss, 1973)

Another important consideration was to treat the knowledge bases as starting points from which to explore new connections and meanings, rather than the more conventional routes of verification and prediction.

In light of these considerations, we constructed a conceptual framework which would enable us to connect several different dimensions of learning, framing them with a holistic lens. The dimensions we chose to include were: (1) chronological time progression, (2) human development, (3) cognitive development, (4) self-directed learning and (5) future projection.

After talking with John Wilson from Iowa State University who was thinking along similar lines, we came to understand that our organizing principle for the conceptual framework was Field Theory (Lewin, 1941). As a holistic, analytical approach, Field Theory attempts to examine the impact and influence that various contextual forces have on any phenomena being studied. We chose to look at contextual forces from a perspective of time, especially as these relate to human development and cognition. We felt that a key to unlocking the thinking and learning processes of adults lay in examining the influences on learning in the present from significant events in a person's past as well as anticipated or desired outcomes from a projected future. Thus, the general framework for the study was a chronological time progression of PAST, PRESENT, FUTURE. Within this blueprint, the knowledge bases of Human Development, Cognitive Development, Self-Directed Learning and Futures Invention were utilized in developing specific methodological tools.

Having arrived at this conceptual framework for the study, the next task was the identification of certain foreshadowing questions that would guide development of the interview protocols.

Figure 1 presents the time framework and selected methodological tools with a few initial questions which guided the design

Figure 1.

Time Framework, Questions and Selected Methodological Tools

Category		Case Study Foreshadowing Questions	Interview Protocol
DEVELOPMENT of LEARNING STYLE (Past)	1.	What does a person's past reveal about their approach to learning? That is, what are the patterns (historically) or conditions (environmentally, developmentally) that help to explain how a person develops a learning style? Also, what obstacles or problems tend to limit or inhibit this learning?	Milestone exercise Coping With Conflict exercise
EXAMINING SELF-PLANNED LEARNING and THINKING STYLE (Present)	2.	What do these people in rural settings need to be able to do (or know) in order to learn what they want to learn? That is, what functional, perceptual, cognitive skills/knowledge are prerequisites for learning in nonformal settings?	Learning Style exercise Cognitive Profile tests Modes of Thinking exercise
PROJECTION of LEARNING INTERESTS and GOALS (Future)	3.	What aspirations, hopes and dreams influence how people learn or what they want to learn? That is, do long-range personal goals suggest emerging learning needs?	Futures Perspective exercise Self-to-Self exercise

phase. These foreshadowing questions became refined and expanded as the interview protocols developed. Looking at a person's PAST for indicators of his or her learning style, the following questions emerged:

1. What does a person's past reveal about their approach to learning?
2. How do people name and describe their own developmental phases?
3. What kind of learning do people associate with developmental phases?
4. What patterns (historical and developmental) and conditions (environmental) help explain the development of a learning style?
5. Does the initial engagement of people in telling their life stories help to establish rapport with them?
6. How can stories related to coping with a particularly difficult time in one's life shed light on one's development of a learning style?
7. What obstacles or barriers tend to limit or inhibit a person from learning?

Then, moving into the PRESENT with an eye toward examining the self-planned learning efforts and thinking styles associated with each individual, the guiding questions were:

1. How does one plan a learning effort on one's own?
2. Where are resources found and how are they used?
3. How does one judge the value and/or effectiveness of such a learning effort?
4. Does any learning from one project transfer to other efforts or interests? If so, how?
5. Can people examine their thinking processes if these people are linked to space (where are you when you find yourself thinking?) and time (what time of the day or night is your best thinking time?).
6. How do people see themselves as problem solvers?
7. In addition to rational or systematic modes of thinking, do people utilize other modes to get answers to ques-

tions or problems? If so, what do they call these modes of thinking?

8. How do the Cognitive Profiles compare to the responses given to personal modes of thinking?

The final area of interest - the FUTURE - focused on a projection of learning interests and personal goals. Here the foreshadowing questions were:

1. What unfulfilled hopes, dreams, intentions do people hold?
2. What do people see themselves doing in a long-range future?
3. What learning needs are connected to long-range goals?

A final set of questions sought to summarize where people were at the end of the interview sessions. Here the primary focus was on the individual. Some guiding questions were:

1. When asked to describe oneself to one's self, how will people respond?
2. How can perspectives of one's personhood indicate a developmental stage and learning style?
3. In what ways will a self-conscious description of self relate to other, more indirect, data about the person?
4. What do people depend on for information and help in their learning?
5. What resources do people find most useful in their self-planned learning efforts?

Case Study Protocols. These foreshadowing questions provided the necessary foundation for development of specific interview protocols.

The interview protocols themselves had their beginnings in several different areas. The first one called "Milestone Exercise," was in fact, much more an activity than a typical interview. This exercise was a modification of a tool used by Art Chickering from the University of Tennessee for understanding one's personal developmental patterns. It focuses on the significant events in a person's life, and how one relates learning and development to these. (See Appendix B for the protocol).

Another protocol called "Learning Style Interview" was a further refinement of a series of questions developed by Dr. Roger Hiemstra of Syracuse University. The questions probed initial motivations, specific planning processes and personal evaluation of a self-directed learning project. Again, these were modified and added to. (See Appendix B for protocol).

Within the framework of a learning style is a person's cognitive abilities. That is, how one processes information in order to solve problems can reveal much about a person's learning strengths and weaknesses.

A series of standardized cognitive exercises developed by Dr. Charles Letteri at the University of Vermont, were utilized. The tests measure cognitive performance on seven different dimensions and provided the researchers with data to compare the rural adult population investigated to other adult populations. (More details on this segment of the study are presented in the section on Findings).

A fourth interview protocol called "Modes of Thinking" and a fifth one called "Reflection and Projection" were designed primarily by the researchers themselves since other tools were not readily available in these areas. The "Modes of Thinking" protocol was designed to enable the participant to think about his or her thinking and to talk about that in concrete terms. (See Appendix B for protocol). The "Reflection and Projection" tool, which was used at the very end of the interview sessions, was designed to help the individual look into the future to see one's self ten or fifteen years from now accomplishing what one really wants to accomplish out of life. Then questions about learning were asked in relationship to these unfulfilled dreams and desires. Included also in this protocol were questions that helped participants reflect back on the whole interview experience. (See Appendix B for protocol).

A final set of questions were suggested to us by a developmental theorist as a way to surface perceptions and impressions of people that could then be examined in light of their developmental stage in life. One was called "Coping with Conflict" which basically asked a person to think about a time that was particularly difficult for them and what they did about it. The other tool was called "Self-to-Self" which asked each person to reflect on who they were and to describe themselves to themselves. (See Appendix B for protocols).

In sum, the tools were varied in style as well as content, and fit into our overall case study design. They enabled the researchers to examine a person's past experiences, their present processes of learning and their future expectations in order to provide a more holistic picture of self-directed learning of adults.

Case Study Team. According to Wolf and Timitz (1976-77), the naturalistic mode of inquiry

> ...attempts to present 'slice-of-life' episodes documented through natural language and representing as closely as possible how people feel, what they know, how they know it, and what their concerns, perceptions and understandings are.

Another perspective on naturalistic inquiry is the process by which all the pieces come together in trying to obtain this "slice-of-life." Throughout the study a process of research evolved which we feel is quite interesting and perhaps even unique. We came to understand this as a research team involving several different people and groupings of people and an iterative process of development which seemed not to follow a more traditional linear model of research. Figure 2 explains the research team roles and responsibilities.

Figure 2. Case Study Research Team:

Cooperative Research Roles

CO-RESEARCHERS

- Three individuals committed to project through all phases
- "Core" Staff

CO-INVESTIGATORS

- Fourteen people who agreed to participate in the in-depth interviewing process
- Involved in generating data and validating accuracy of case study descriptions

CO-INTERPRETORS

- Twelve consultants who stepped in and out of the project
- Involved in helping shape case study design, critique findings and reflect on implications
- Contracted to write monograph papers relating their discipline and perspective to our research project

The three who collected data, who did all of the case visits, are called "Co-Researchers." Their basic functions were to design the research, collect the data and analyze its results and thus, were involved from the beginning to the end as the core staff for the research study. A second group, the respondents are called "Co-Investigators" because they were involved in the process of clarifying the language that was used, the questions that were asked and also helping to check the validity of the data. The Co-Investigators were involved in a kind of symbiotic relationship with the Co-Researchers, each influencing eachother's language and thoughts. A third grouping, the various consultants who were used intermittently throughout the study, are called "Co-Interpretors." They were carefully chosen to represent the multiple disciplines represented in our study. (See Appendix C for descriptive list). Called upon to react and critique, these consultants had input into the design, to the initial data analysis and to the final analysis. In so doing, they helped us sharpen our focus, provided a critical perspective, and offered multiple interpretations of the data. Over a period of six months which included two group meetings, these Co-Interpretors participated in critiquing the case studies from their own discipline and perspective and have developed a series of monograph prospectus for a possible publication. (Presented on p.6 of Dissemination Section).

Case Study Procedures. With this framework in mind, a subsample of 14 individuals was chosen from the original interview group to be Co-Investigators. Representativeness according to age, cohort, sex, educational background and rural or small town residency were criteria used in selecting this subsample. Table 5 describes this sample.

Table 5.

Case Study

Demographic Profiles

Total = 14
Males = 6
Females = 8
ABE = 4
Non-ABE = 10
French-Canadian descent = 8, (5(F), 3(M))
Non French/Canadian = 6
Age Range = 24-75
Age Cohorts:
    24 - 34 = 3
    35 - 44 = 3
    45 - 54 = 3
    55 - 64 = 3
    65 -- = 2

Three researchers conducted approximately 15 hours of conversational interviews with each of the Co-Investigators over a period of six months. Most of these sessions occurred in people's homes and at times that were convenient for them, ranging from early morning to late at night.

The Co-Researchers used tape recorders as a verification back-up to their note-taking throughout the visits. (Portions of the tapes were transcribed for specific analysis purposes).

Co-Researchers also recorded additional perceptions and information in journal-like fashion. After each visit the three Co-Researchers gathered to discuss the interactions, solve any emerging problems and plan the next session. Modifications and adjustments of language and approach were made on a concensual basis. This provided a common understanding of the procedures as well as a sense of ongoing support among the Co-Researchers.

When the visits were completed, individual case study reports were written, condensing the many hours of conversation into the format of a biographical story. Several editings were conducted by different individuals, primarily for stylistic and grammatical purposes.

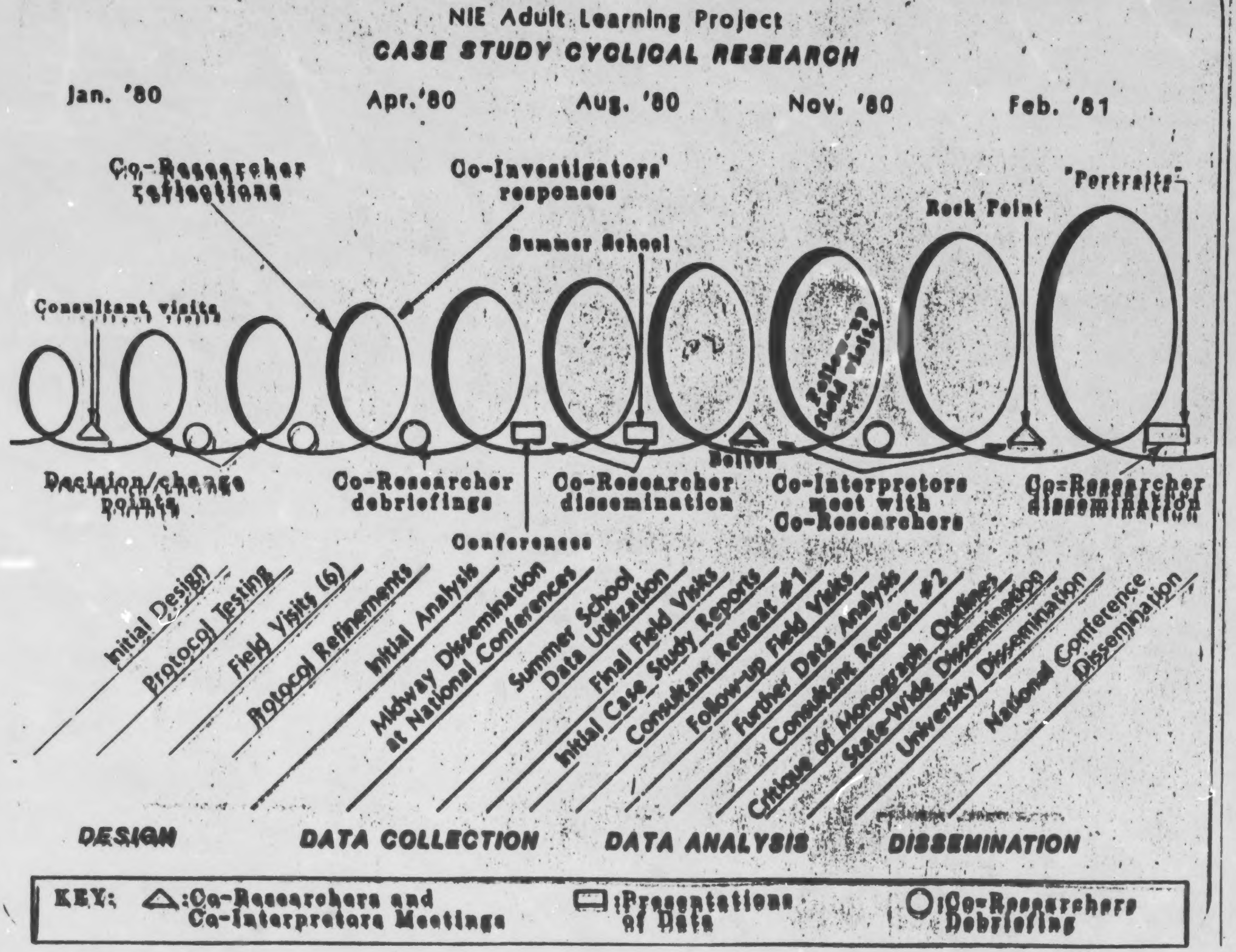
About three months later, when all 14 case stories were completed, the Co-Researchers returned to their respective Co-Investigators to check out the accuracy of the write-ups and share the results of the cognitive tests. Some additional summary questions were also asked. This offered a chance to have a validity check on the data as well as bring some closure to the experience for both Co-Researcher and Co-Investigator. Following these final visits, the case stories were retyped with suggested changes and then copies were sent to each Co-Investigator with a formal letter of thanks.

Case Study Cyclical Research. To demonstrate how the research team worked together and the iterative nature of this exploratory research, a model has been designed to convey the cyclical movement experienced by the researchers. See Figure 3 on following page.

At the bottom of this model, you will see the ordering of research from Design to Data Collection to Analysis which appears in a linear format. However, each one of these phases of the research were experienced throughout in a kind of overlapping and iterative development of research. For instance, while data collection primarily takes place at the beginning in successive visits to our Co-Investigators, there was another data collection time during the follow-up visits which occurred after some of the analysis was begun. Thus, data collection happens near the end of this model as well as more typically near the beginning.

This was true of the data analysis steps. After the first phase or Tough replication a tentative analysis was presented to a group of people at the AAHE conference in Washington in an informal luncheon discussion. That was before we had begun the data collection of the case study design. This reporting of tentative findings became a reoccurring theme as we had several occasions to make informal presentations at other meetings and conferences. (Later these dissemination sessions will be discussed). With each spiraling movement, this cyclical approach to research provided the chance for moving forward, reflecting back and touching base with other people and then moving forward again. The implications of this model will be discussed later.

Figure 3.



NIE Adult Learning Project

CASE STUDY CYCLICAL RESEARCH

C. Case Study Portrayals and Process Statements

Ambrose

Aube

Bell

Bolduc

Desautel

Field

French

Keller

LaCroix

Moss

Paquette

Petit

Rock

Simpson

Case Study Portrayals and Process Statements

At the completion of the case study visits, the three Co-Researchers synthesized and condensed the many hours of conversations and observations into case study portrayals. As recommended by Bob Stake, these descriptions were a synopsis of the Co-Investigators responses leaving out references to questions asked by the Co-Researchers or interpretations from them. As such, they were intended to be as objective as possible, serving as a condensed record of the rich data collected over several months.

To provide a more subjective dimension to these case portrayals, each Co-Researcher developed a process statement for one of the case portrayals. These reflective interpretations of the case study visits are included for the first three of the cases and serve as complementary pieces to the more objective case portrayals.

Because these cases are the core of the study they are included here as centerpieces rather than hidden away in the often unexamined Appendices.

For a condensed profile of each Co-Researcher, please refer to Appendix D.

Case Study

Mr. Ambrose

A tall, hardy and weathered man of 53, Mr. Ambrose was born and raised in a farming community in rural Vermont. He left school after seventh grade and worked on a number of farms, including his father's. In 1946 at the age of 19, he left home to join the Navy. Two years later when he re-entered civilian life, he began the struggle to find a job as an unskilled laborer. For the next thirty years he tried out several occupations, including truck driving, road construction, tannery, bartending, milk delivery, working in a plastics factory.

Three years ago, at the age of 50, he returned to his home state and decided to become a farmer. He had tired of the urban life and was disturbed at the unhealthy conditions of the factories. In addition, when one of the businesses he had worked for closed, he lost his benefits and felt that he and others were being taken advantage of. The realization that he wasn't making any headway in his jobs and the urge to once again work in a healthy, outdoors environment propelled him into this new career. He's presently renting a modest farm and struggling to make a go of it. "It just happened I guess that the good Lord blessed us. This place ain't much but you're going to get along with it, you know."

Leaving home to join the Navy was "quite an event" for him.

> To me I never knew really what an airplane looked like -- what a ship looked like. We were very, very naive as far as that goes. We never knew nothing because we never went nowhere, and it was quite an experience for me to see this. It was also more or less, well, you were scared, you know, as a young kid coming off the farm.

His mother and father sent him off with a warning to watch his money and he said, "I lived in fear from that time on until I learned how to handle situations on my own." In the Navy, he realized that while he didn't know much about planes and ships, many of the urban recruits knew nothing about farms. At first he laughed about their ignorance but then he "woke up" and realized he needed to explain farming to them and that they could teach him about another way of life. More specifically, he learned "how to handle myself," "how to operate landing barges," "how to cook." Traveling from country to country was an eye-opening experience for the young farm boy. He was especially amazed at all the "spoilage" he witnessed where millions and millions of dollars were lost by "dumping" tanks and planes. Also he saw many starving people which affected him greatly. He called this period of his life "Great Experience - Traveling with Navy."

Out of the Navy, he tried truck driving and construction work before landing a good job in a tannery where he learned the whole process of shoemaking, finally working into a shoe shop. He also became involved in union issues and was chosen President of the Local Union for 12 years, building it up because "financially it was in the hole and I saw to this mess... I came up with the idea of running a pool, a weekly pool, where half goes to the person that wins it and the other half to the local." He also initiated a "Food Basket" delivery for men out of work, helped educate new union recruits about their rights and fought for better conditions. The President of the United Shoe Workers of America encouraged him to "stick with it" promising him a job in Washington as a director someday. However, he lost the chance for this opportunity when another man with a high school diploma beat him in an election. Mr.Ambrose commented "I hate to say it this way, but he actually never done too much with the people....just because of education, he got in there and that was it!"

> If I'd had high school, I'd had him beat, 'cause I was for the people and they knew it...Like I told you before, it's not all education sometimes if you got experience. In other words, the book is good, I'll never disagree with that, but the experience is much better!

Mr.Ambrose talked very little about family although he mentioned the hard days of raising five children - two of them twins - during some lean economic years. He would work a full day job and then do bartending or other odd jobs at night to keep the family group. He named this time in his life "Hardship and Raising a Family" and it spanned [illegible] years.

Mr. Ambrose talked fondly and at length about the annual fishing trips to Canada with some buddies. In fact, he admitted that if he had his druthers, he'd do that all the time. "I'm a bug for fishing, hunting - oh, terrible! You ask my wife. I always lived for that; every day I had off, I was somewhere."

Another significant time in his life was when he broke his leg twice in the same year at forty-five years of age, resulting in two years of being laid up. Being a very active person, he had a particularly difficult time with this. He claimed that he's never been the same since as "it weakens your system." He became quite depressed after the second break. However, he recalled driving his car with one leg, spending time at the company club talking with friends and making do financially. The experience of being laid up had a significant impact on him.

> I wasn't thinking about it then, but I used to see others in the same predicament and realized that if I could help them then I should. It comes back to you another way, in a different form from somebody else usually. If I did something good for you then I would get it back from somebody else.

When he finally returned to his job, the company closed within a month and Mr.Ambrose lost all of his benefits due to some legal maneuvering by the company.

More recently, Mr.Ambrose suffered a ruptured disk while working on his farm. He refused to submit to an operation, fearful of being "put under the knife." Because of his basic distrust of doctors and their surgical approach to health problems, he attempted to continue with his chores, suffering a great deal. A cousin of his told him about a spiritual healer in Canada and encouraged him to go for help. In spite of being very skeptical about this kind of thing and not being a religious man, he did go. Describing the experience, he expressed awe and amazement at feeling an intense heat from the healer's hands and walked away from the event completely healed. He has given up trying to understand this, although it has deepened his interest in spiritual matters. Since that event he has continued to utilize this healing route.

Having always been concerned about the less fortunate, Mr. Ambrose and his wife recently have taken into their home a teenage girl, a friend of their daughter's, who was having many problems with her family. He expressed a desire to someday have "city kids" out to his farm and give them a chance to see another way of life.

Perhaps the most significant event in his life was the decision to start farming three years ago. It was not an easy one, especially since his parents had always said he'd never make it as a farmer. They even warned his wife to not let him take up farming, "because I like to be with people too much." Now, today, his wife realizes that she held him back too long and wishes they'd made the move sooner when they had some equity. During the first year he suffered some setbacks, losing several cattle to disease. But he's been building up his herd, discovering ways to increase his grain yield and milk output. Starting late in life, he realizes he has a bit of catching up to do which motivates him to seek help and advice from neighbors, farming journals, extension programs and simply using his own good common sense. This recent period in his life he names "Accomplishment of Dream of Own Business."

Mr.Ambrose realizes that it takes a good three years before a beginning farmer can feel he is getting someplace. Thus, he is quite optimistic that he will be successful. In fact, he says that some farmers are now coming to him for advice. This is especially related to his proclivity for experimental approaches to problems. With meager resources and limited time, he has been forced to think of inventive ways to short-cut expensive and longer-range solutions. Much of his recent learning projects involve modifications of machinery, building space and more traditional methods of farming. One such learning effort which he described in detail was the modification of a garage into a chicken coop and pig pen. Because there wasn't time to build another dwelling, he spent time visualizing it and then set about to construct his mental model. When asked if he used any kind of blueprint, he said he sketched out something but that one couldn't call it a blueprint. His plan further developed when he found a discarded door and window and then he proceeded to build aroung these. He discovered a way to hinge the window for disposal purposes, how to level the floor and fit the door into the original frame. In all of this effort, he described his thinking process as "dreaming" about the way it could look, trying out several different options and only beginning to work when the "picture is clear." Presently, he is picturing ways to utilize his barn space more effectively after helping his son-in-law modify his barn space. He claimed his motivation for doing this is to better himself. Mr. Ambrose feels proud of his accomplishments.

In describing exactly how he thinks through these projects, Mr. Ambrose admitted that sometimes when he has a thought, he'll say to himself, "It's impossible. It's impossible for me to do this because it's going to be either too costly or it's going to be, you know, out of line and I cannot handle it." After putting it out of his mind for sometime,

> It'll come back to me in a way that I'll be thinking of the same thing and then I'll more or less modify it probably and turn around and it'll come out at a different angle. Well, because I feel that there's probably going to be a way that's going to fit my needs.

Mr. Ambrose tends to do his thinking about projects when he is doing his chores. He describes it as "hitting two birds with one stone," and "almost like a meditation." Also, he thinks a lot before falling asleep, and sometimes wakes up with an idea "before the night's over." As previously stated, he usually spends a great deal of time figuring out how to do something before he launches into a project, "If it requires alot of tumbling around in the brain, it takes time." One reason for being cautious is a fear of not remembering a complicated process, especially since many projects he undertakes involve machines and motors.

Describing the dilemna of being a jack-of-all-trades, he says:

> You gotta pay attention because you're not in there every day and that's why it makes it more complicated for the guy that does a little bit of this and that. He had to think a little more so he gets it where it's supposed to be.

Besides using a visualization process to plan a learning effort, Mr. Ambrose also gets answers to technical problems by looking at the object in question. "I'll be looking at it to see why it's not operating." Rather than manipulating the machinery, he'll often get an answer by this method of visual attention. Also, when he's not concentrating on the problem, perhaps while doing chores, an answer often comes to him. "Something will come to me fast when I've done something wrong. It just dawns on me."

Mr. Ambrose remembers thinking this way as a youngster. "I was a dreamer. I was always dreaming about fishing or the future." He always wanted to do "something big" in the future, like work with big machinery or be a cowboy. At an early age, he realized that he had ideas about how to modify tasks to make them easier or more efficient. However, his father and uncles wouldn't listen to him, thinking he was foolish. One gets the sense that now he is finally living out some of those early dreams and "foolish" ideas.

Describing himself to himself was a very difficult thing for Mr. Ambrose to do. "I don't know just how I'd do that...I never got into that...Boy, that's a real good one!" When he began his description, he made a couple disparaging remarks, "I ain't much of anything, if that's what you want to know (laughter). I'm just a human being." He went on to say that he would like to see other people trying to do what he's doing, and accomplish as many "benefits" as he has. He feels he's finally had a chance to fulfill his dreams and wishes. Others would have the same chance. Secondly, he thinks he can always learn more and hopes to have the chance "to help somebody else with some of my knowledge."

Once Mr.Ambrose got started with this difficult question, he had no trouble.

> Well, I'm -- I'm oh -- probably the funniest character you probably ever met! I can be very, very rude at times, quick-tempered at times, and I can be just as nice as can be if I am not pushed around you know...if I'm not -- you know, bullied around, you might say. I have no real, real fear of other people. I've always been in good physical condition and in athletic league. I'll sum it up as very strong all around. And many a time, I've been discouraged, depressed because of bad luck and I've had alot of that!! But I've always overcome it by hoping and praying that if I tried a little harder and thought it over a little more, my mistakes whatever comes to me. I try to come out of it, in other words. But I've always liked to help the underdog -- that's one great thing, I've always did. I've tried. The crippled, the old -- I always had an awful soft spot in my heart for them.

Question: Do you know why?

> I think it was the bringing-up I had and thru alot of experience with loved ones. I was taught that God, you know, when you get right down on my knees, pray to Him, go to church -- and I was always told never to overlook an elderly, always try to help them out -- the crippled -- never to laugh at them or make fun of them, you know. That's the reason I think I got into being President of the Union for that reason, alot of it. I wanted to get out there and help -- the ones that couldn't speak for themselves or couldn't handle their problems without getting hurt somehow or other, from the management you know. Them days you had to be right on the ball and get right after somebody and back then - just to give you an example, you couldn't have different lunch periods and stuff like that. Alot of them wouldn't allow it! They'd want you to work on the job and

> just take a bite and keep going. This is the way it used to be at one time. This is what I fought for, is for better conditions and everything all around, lighting conditions, Oh God a number of things there.

In the future, Mr.Ambrose visualizes a small log cabin, a few acres, and a machinery repair side job "when I feel like it." Traveling would be his major activity, going west to visit "buddies" and "see how they've lived their lives." He and his wife would like to live in Alaska. Not only would Mr. Ambrose like to be free to hunt and fish at his leisure but also help to keep the wildlife safe in a wilderness that was fast disappearing. "One of my dreams is to keep things the way they were so that other generations can enjoy the wild." He could see himself learning about management of wildlife and then make movies of wild game and fishing to show to civic clubs. Mr. Ambrose feels there is "no end to what you can learn from animals. I've always dreamed of being a game warden, but I haven't gone to school for that -- to learn biology and such."

A potential of his that he feels hasn't been explored is running for a political office. However, "Education has a lot to do with it. Knowledge is not all education. I'ts good common sense." As far as more learning, he feels that he would learn things like photography -- while "in the field". However, he would be interested in advice for buying a reasonable camera. Mr.Ambrose expects to continue learning farming skills from extension people and individuals who are "in the field, who really know what they're doing."

Because he has travelled extensively and worked in varied jobs especially in urban areas, Mr. Ambrose feels he is different from many of his rural neighbors. Several times he talked about the reluctance of many of his neighbors to give advice and help, something that he finds unconscienable. Since he has returned to Vermont he had noticed that "It's the mighty dollar around here that counts." He also feels differently than his rural neighbors about people coming from other nationalities, having worked closely with different ethnic groups. "I think this is what makes this country great!" It disturbs him to "hear alot of them (neighbors) say - well, about this Jew guy or about this Frenchman or this darned Irishman. Well, you hear them talk alot like that around here, but I don't go for that."

Something that would give him great satisfaction would be to:

> ...tell the world what's going on here in the U.S. And then I'd feel I had accomplished something for the younger generation.

> I'd tell them (young people) they can't have everything in one year... I'm trying to make my own family understand this. They don't have any outlook for the future. They live today and forget tomorrow. But they have an opportunity I haven't had.

Determined to make a go of his new farming career, amidst the failures of many small farmers who are selling out, Mr. Ambrose describes one of his motivations:

> I was told when I came here - it came through the grapevine that some of these farmers who had been in business for some years said that I wouldn't be here in two years. You know, this made me think alot - you know, determination. I was determined that they would never see me leave in just my rags, you know. I'm still determined that they won't, you know, although I've run up a couple hard - how would you say that - blocks! I'm going to break them blocks and open up a new light!

Another aspect of his determination is to try to help the land do the best it can do:

> Well, I feel like I want to know the land more. I feel close to it; I mean I'd like to see it do better and I would say that makes you feel close to it.

Reflecting on the impact of the interview sessions, Mr. Ambrose commented:

> I think it was educational - made me think about other things...I think that it opens up some of these ideas to the point where you think a little more and it starts your mind working again, you know.

CASE STUDY

Mr. Aube

A tall man with Native American features, Mr. Aube is thirty-eight years old and lives in a small rural town located along the Vermont/Canadian border. He is of French-Canadian descent, has completed five years of formal education and is currently enrolled in the local Adult Basic Education (ABE) program. Mr. Aube's income is fixed due to a physical disability. He lives alone in a neat but sparsely furnished apartment. Scattered throughout the apartment are examples of Mr. Aube's favorite hobby: woodcarving.

At the age of ten, Mr. Aube left school to work on the family farm. He had been expelled from school due to his restless nature. As Mr. Aube explained it; "At that time, I didn't see the need for schooling. I was a hellion and I didn't take much to authority. Anyways, schooling and me didn't agree so they kicked me out."

Mr. Aube continued to work on the family farm until it was sold five years later. The family then moved to a nearby town village where Mr. Aube found work in the local mill. There he worked as a laborer for three years before moving to another mill some fifteen miles away. Apparently his "free spirit" got the best of him again, as Mr. Aube lasted only one week in that job. Soon after he was fired, Mr. Aube found work in a nearby furniture factory where he worked as a machine operator for the next seven years. From there, Mr. Aube went to work for several years as a carpenter with two local social service agencies.

In 1976, he was forced to stop work due to a physical disability that affected his lower extremities. Since that time, Mr. Aube has kept himself busy doing odd jobs for neighbors and expanding his woodcarving craft. Much of his woodcarving business is done by special order and includes engraved end tables, coffee tables, and pictures of small game animals.

Looking broadly over his life, Mr. Aube identified 14 significant events and categorized them into four thematic groupings. The four groups included (1) Working Theme (2) Family Theme (3) Illness Theme and (4) Schooling Theme. The length of each grouping varies from fifteen and six years for the first two respectively, to one year and two years for the last two groups.

Mr. Aube talked sparingly about these life events, as if he didn't want to uncover wounds of the past. His answers were usually direct and to the point with little expression or amplification. Mr. Aube summed up his feelings by saying, "I don't like to talk much about me or my family ... it ain't pleasant so I don't dwell on it." This reticence was something that would appear again and again throughout each succeeding interview.

Commenting on a personal conflict or crisis in his life, Mr. Aube talked of a relationship problem he had with a girlfriend of three years. Apparently both fought on a regular basis. Mr. Aube referred to this time as particularly difficult. "I was drinking then - bad on drugs .. and everything. In a sense, I was self-destructive. I didn't get into anything positive." Mr. Aube talked of finally leaving this unfortunate scene fearing that, "I might have done her in if I didn't." When asked what he learned from this crisis, Mr. Aube offered the following. "I learned not to trust women too much - the more you give 'em, the more they want. Learned I can handle my own money. Also learned that it's easier living alone. That's about all."

Describing himself to himself was very troublesome for Mr. Aube. "Talk about myself?" he said, "ain't much to talk about." Even after some words of encouragement and clarification of the exercise, Mr. Aube remained adamant about not responding. "I don't like to talk about myself. I don't even talk about myself to my mother." Later on, Mr. Aube admitted not even talking about himself to his psychiatrist whom he had seen for three years.

Regarding his recent learning efforts, Mr. Aube described four projects all related to the Local Adult Basic Education program. The four projects include 1) Spelling 2) Mathematics 3) Science and 4) History. Mr. Aube talked of enjoying his ABE assignments very much. His favorite subject, however, is Science. "I've always been interested in animals and plants," he said, "I'm a flower nut." When asked how he originally decided to enroll in the local ABE program and work toward his diploma, Mr. Aube recounted the following incident.

> Several years ago my daughter, who is crippled, wrote me a letter. In the letter she told of many things but because I couldn't read or write, I couldn't read the letter. I resolved then and there that if my daughter could learn to read and write, I should be able to do it too. So, I got involved in the ABE program here in town and now can read and write pretty good.

While Mr. Aube is proud of his newfound ability to read and write, he still feels that he has much to learn. "I've just started," he said. "I've got much more work to do, but I enjoy it pretty good. The best part is I don't have to depend on anybody reading a letter for me anymore."

Overall, however, Mr. Aube is not aware of how he tends to go about learning or solving a problem. "I don't know the why's or how's of it all - I just know it (learning) happens."

A similar response was offered for who or what tends to shape the way one learns. Mr. Aube looked baffled and confused and after several pensive minutes, offered the following explanation: "I don't have the foggiest idea - just doing it I guess - nothing in particular shapes my thinking or learning."

While Mr. Aube may not know exactly how he goes about thinking or learning, he did say that the rational, step-by-step approach to problem solving suited him best. He described this approach as "a time saver ... because you think things out, it saves you from making foolish mistakes. I'm highstrung, and know if something ain't thought through. I'll get frustrated and big mistakes will happen. So, in order to prevent this, I gotta think things through before acting too hastily." When asked if he used any other approaches such as intuition or dreams, Mr. Aube flatly responded by saying, "NO! That's the 'hair-brained' method and it ain't no good."

When Mr. Aube is thinking, he talked of it occurring mostly at home. Often the television is on since it lets him assume a neutral position while thinking through a problem. Sometimes images or solutions to problems are triggered by a specific television program. For example, a public service program offered by the University of Vermont Extension Service devoted to woodworking arts and crafts provided Mr. Aube with an answer to a woodcarving problem involving a special technique he didn't know.

Reflecting on any differences between the way men and women think, Mr. Aube was adamant in his belief that women are better thinkers since "they don't have a temper." This factor, according to Mr. Aube, "makes it easier for them to think and solve problems. Men, on the other hand, are undone by it."

Looking into the future, Mr. Aube talked only of getting his family together again. Speaking directly to the point he said, "All I want to do is get my kids and my ex-wife together again. That's all I'm concerned about - just getting my family together again. It's been too long now and that's all that matters to me."

As for any untapped potentials or strengths, Mr. Aube thought he probably had a few, but couldn't think of any in particular. "I know I've got some, " he said, "but it's real hard to put a finger on 'em right now."

Regarding any upcoming projects, Mr. Aube talked of learning how to cook better and improving his reading and writing skills. Commenting on the latter project he said, "I've got these two kids who know how to read and write. By my learning how to read and write better, I'll be able to read and write to them. That's a big goal for me - I want so badly to be able to express myself to them. I look forward to it."

Overall Mr. Aube appears to be motivated by strong desires to read and write and get his family together again. He is a private man, very stoic, who at times has trouble expressing himself clearly.

Mr. Aube feels that the past is no route to the future, thus he continues to withdraw when asked about it. Realizing his temper has been a handicap, he seems to practice self-denial in order to cope with his life. Mr. Aube knows that a better tomorrow for him is rooted in learning how to read and write better. But, contingent on personal progress is coming to grips with who he is. Toward the end of the interview he offered the following,

> I know my failings and I know my strengths. The problem is understanding them so that I can control 'em.

Recalling what he was like as a youngster, he has advice for young people in schools today:

> When I went to school, I didn't want to learn and I didn't. Just like the old saying, "You can take a horse to water, but you can't make him drink..." Alot of young people I know just want to get out of school and I tell 'em they gonna learn the hard way if they quit school now. Might as well learn while you can.

CASE STUDY

Mrs. Bell

Mrs. Bell is from Canadian and Vermont descent having spent almost all of her 62 years in and around the small hilly town where she presently lives with her husband and one of her grandchildren. Their home is modest in size and spotless, and overlooks the valley and town below. Both are retired from many years of working several different jobs which include the local mill. For some time they have also been "helping out" their children and grandchildren financially.

As an active Jehovah's Witness for the past 30 years, Mrs. Bell spends much of her time studying, reading, attending conferences and meetings, and making "home visits" to bring the word of Jehovah to many surrounding counties. Her belief is shared by her son and sisters and continues to be a major part of her life.

Mrs. Bell remembers being very determined as the youngest daughter in a large family. Following her mother's death, she was raised by her father from age seven. According to him, "a High School education wasn't necessary for girls - marriage pre-empts that." She left school at age fifteen, with eight years of education, an act she now claims was a "stupidity." She was married a year later to a man who shared her love of music and song. However, she thinks she should have listened to her sister's disapproval instead of entering a marriage that early in life. It soon became difficult for her. Her first child was born the year after her marriage and the family moved closer to Mr. Bell's job on a gypsy moth crew. That winter her father-in-law moved in, and with a second child on the way and no help carrying loads of wood up an icy three flights of stairs, Mrs. Bell decided she "couldn't go any further" and left to go back home on New Year's Day. Her husband continued to visit week-ends and that spring her son was born with a defective heart valve. Although his chances of living were slim, Mrs. Bell nursed him past his initial attacks, only to find out later that he was epileptic.

Finally, Mr. Bell's job moved closer and allowed them to resume a normal living arrangement. Following the birth of a third child, he started work in the local mill. Soon after, they moved to the town where they now live. Frustrated in her attempts to get expensive medical attention for her ailing son, Mrs. Bell decided to go back to work to raise the money necessary and learned she was pregnant again. She says "the thought of doing that all over again was very hard to take ... I knew my son would have to take the preference." When her daughter was six weeks old, she went to work in the mill. It was something she dreaded, having been "rather reserved ... not forward enough ... I felt I did not have education enough ... speak well enough. After I listened to them for a period of time - six weeks, two months, I came to the conclusion that I certainly could say anything that I heard and probably say it better or at least as well."

After several bouts with ineffective medications, Mrs. Bell located a chiropractor, who eventually helped her son enough for him to start first grade. That same fall of 1944, before the birth of her fifth child, she was introduced to Jehovah's Witnesses via a pamphlet left at her door. Mrs. Bell soon started Bible studies, taking hope from a religion that would give her strength to help her child.

Two years later, she finally met a new doctor who correctly medicated her son and recommended the Epilepsy Clinic at a Burlington hospital. During his treatment, she kept a diary of medications and behavior before and after convulsions.

The following years saw an increase in her marriage difficulties and she felt close to a nervous breakdown. She eventually confided in her Bible teacher, who showed her scriptures stating she could not leave, except for adultery. She accepted the Bible's mandate and stayed, admitting it has been very difficult. Mrs. Bell made a decision to devote most of her life to Jehovah, even giving up studying piano in favor of Bible study. She was baptized in the Fall of 1950 and it was "the most important event of my life."

Mrs. Bell encouraged her children in music, enabling them all to have instruments and lessons while they were growing up. She sewed a great deal also, and remembers knitting endless mittens for her own children and soon-to-be grandchildren. Mrs. Bell had been doing both mill and farm work, and in 1960 began seasonally sewing ski wear for a local outlet. She stopped work four years later to nurse her beloved and ailing father, who had come to live with them. He died that winter, and Mrs. Bell, in light of her Bible teaching, feels hopeful of being reunited with him.

The next ten years segment Mrs. Bell remembers as a "trying time." She switched jobs to lighter dress shop sewing, and finally left work for good to help her youngest daughter look after her children following a separation.

In 1974 Mrs. Bell was bedridden with an over-active thyroid, and felt "thoroughly discouraged" both at her own incapacity and at missing Jehovah's Witnesses' meetings.

In the intervening years since her recovery and the present, Mrs. Bell's life has centered around her religion and her grandchildren, encouraging them musically and educationally.

Mrs. Bell has thought a great deal about her life, and is interested in writing and publishing her own life story. Accordingly, she listed 30 milestone events in great detail, and grouped them under four themes. The themes were (1) Quite Disillusioned With Marriage; (2) A Hope That Would Alleviate My Child's Problem; (3) Joy and Sorrow; (4) Living With The Hope of Meeting The Approval of My Creator. The time spans for themes were quite similar - with the first two taking seven and six years, and the later two spanning fourteen and fifteen years.

Although her growth and involvement as a Jehovah's Witness engaged much of Mrs. Bell's memories, she spent considerable time talking of her father, whose emotional and financial support helped her troubled marriage. She talked at length about learning many things thus far in her life and she expects to learn many more. Some of her valuable early learnings included child care with love and discipline. Singing to herself and her children has been significant throughout her life, enabling her to cope, and "just for the benefit of singing." Also important were keeping records and understanding people like her epileptic son. She also learned that "I wasn't as stupid as I thought I was." Her thoughtful and precise manner of speech reflects a learning effort that stems from a dislike of sloppy language. "I think," she says, "if you can only speak one language, why not do it as well as you can. And of course, this has been an education thing for me from the time I started working in the mill ... because I learned I did have the capabilities and then when I became one of Jehovah's Witnesses, the road was open for me - because Jehovah's Witnesses are people that continually learn. We have what we call a Theocratic School and here is where we are able to give what we call 'student talks'."

A particularly difficult time in Mrs. Bell's life occurred during the early years of her marriage - when she discovered her son was an epileptic. Thinking she recognized his increasing convulsions as epilepsy, she tried everything she could to get help. Dissatisfied with the recommended morphine, she continued searching for help, engaging a chiropractor and making many long trips and fruitless investments in medications she hoped would help.

> This was a time in my life that was very hard to deal with .. you know, many people feel that it's a shame or dishonor, disgrace if you've got somebody in your family that is an epileptic. (As far as I'm concerned, that's nowhere near as much a disgrace as it is perhaps to have a drunkard because they usually get into that by choice.) The simple fact that he is my son and I knew I was the one that was responsible to do something because Mr. Bell never liked responsibility of that nature.

Mrs. Bell went to work to try and earn money to send him to Burlington, and finally met a doctor who set things up for them.

Mrs. Bell feels that for this crisis, as well as others, she does what is necessary, and allows herself to feel tired only afterwards.

tried to work in Bible study time whenever she had a free moment. She finally set aside Saturday and Sunday to call at homes. With no transportation she and other church members walked many miles. She continues attempting to use her time wisely, juggling twenty hours of "house-calling" and five meetings per week in addition to her own study time. Mrs. Bell sees her Bible study and house visits as a lifelong experience.

For Mrs. Bell, much of her problem solving and learning revolve around coping skills and concentration, as well as efforts to please God by doing what is required of her as a Jehovah Witness. She believes that one's personality definitely shapes the way one learns. Early in life, she modeled qualities esteemed by her father, especially keeping things in their place and following the adage "anything worth doing is worth doing well."

Her thinking and learning style also reflect these qualities of order and purpose. Preparation is all-important. Jehovah Witness training is quite specific, and though it may seem dull and monotonous to others, she enjoys the "ABC way of doing it ... because I'm an analytical-type person." She stated that if she had to put a label on her life, it would be "an analytical life in the service of Jehovah." She felt she used this type of thought even as a youngster, with her keen sense of order. "I don't dilly-dally around very much ... I pay attention to minute detail - I like doing little things."

Mrs. Bell has been an avid user of resources ever since her son's illness, utilizing both publications and expertise of others to get information and guidance. Of late, she also consults with the elders of the congregation, and refers to the many Jehovah Witness publications available, especially Watchtower. With a dictionary ready at hand, she's made it a habit over the years to "look up every single word I don't know right then and there," and thus feels she's built quite a vocabulary.

Although she doesn't believe in worrying, she does most of her thinking in bed at night, trying to continue a problem to its solution. If she can't progress further or wants to store a thought and come back to it, she often leaves something out of place on the nightstand or floor as a mental note. Also, prayer or something someone might say will often give her "instant recall" of something she should have done.

Mrs. Bell has also found solutions in pictures and dreams, and remembers one vividly recurring dream during the time her marriage was most troubled. In it she was lost in charred and smoking woods and despaired of finding escape. Soon, however, a figure on a white horse approached her and led her out. Shortly thereafter, she was introduced to Jehovah's Witnesses by a visitor and the dreams disappeared.

Mrs. Bell pointed out that the Bible says women often think with their hearts while men with their minds. She feels she thinks with both, and although her heart "gets in the way," she tries to think

She doesn't give it alot of thought, she claims. "It just seems to open up the way that's ... going to be the best ... I can't just sit down and cry because he's having convulsions ... so I went about applying my help to the best of my knowledge." It was very important for Mrs. Bell that he continue living "because this was my child." She had to change her concern to encouragement, the doctors told her, and "not show him favor to the degree of keeping him from going off with the others. So this meant I just had to have tighter self-control and be strong enough to watch him head down the road ... and look at him and smile and wave ... when inside I would say 'will he come back?'"

Mrs. Bell learned many things about herself during this period. She states, "I'm a very determined individual - I find I don't give up too easily on most things if they're worth pursuing." She also learned she can be quite outgoing, in comparison to her childhood. Her mother died when she was young, and this "seemed to make me an oddball. Children don't handle things like that too well and I felt that I did not have as much education ... was not capable of expressing myself as well as most people."

Further describing herself, Mrs. Bell believes she is an honest, loving person, qualities people might not recognize right away because she's also strongwilled. She feels she has a wide capacity for friendship. "I like most people - hate their bad ways but I don't hate people." She states quite frankly that she "tends to expect more of people than they have the capacity to give. I know that whatever I would expect of myself, others can do also." She also admits she has a terrific temper, but controls it. Mrs. Bell declared she was the type of person she would enjoy meeting or would like to know. Reflecting on her experience and zest for education, she says "I like to associate with people who can talk about many different things, and can carry on quite a conversation ... I like anyone for their personality." She also claims she's "not entirely domesticated." Talking about housework doesn't interest her - in fact, to get to get together with a roomful of ladies and talk canning and cooking ... bores her to death! "I do my own housework - a set pattern and schedule, it comes out looking good - so why change?"

Mrs. Bell's love of conversation, stamina and outgoing personality are no better evidenced than in her current learning efforts in which she continues to educate herself to bring the word of Jehovah to others. Although she had always been interested and intrigued by stories of missionary work as a child, Mrs. Bell felt this particular learning effort was stimulated in part by her early mentor, the man who converted her to Jehovah Witness. From the added comfort, solace and guidance he gave her, Mrs. Bell felt she gained self-control, coping skills, and a commitment to convey the "word of Jehovah" with others.

In line with her affinity for order, Mrs. Bell discovered she needed to make some changes in her schedule to accomodate her learning effort. Initially she eliminated piano instructions, saying, "I couldn't just tell my children to move out of my schedule." Then she with logic and reason. She had this to say about thought in general: "If you put good things in your mind, then those are the ones you'll think about. This is general as opposed to problem solving thought, of course. If people feed their minds garbage, then their speech or personality might not be good either."

Talking of herself in the future, Mrs. Bell fantasized herself as part of a "new system...that the Bible prophesies were on the threshold of; I would hope that I would see a cleansing of wicked conditions and the set-up of a theocracy." Mrs. Bell thinks that if she had to do it all over again, she would become a foreign missionary. She hopes she would develop the strength and self-control necessary to undergo persecution for her beliefs, but thinks she'd do pretty well, being very "determined and strongwilled." Her main goal is "greater knowledge and wisdom to magnify Jehovah's name," and that translates into further study for her.

She mentioned that many college professors believe that all the studying, conference attending, and lecturing each Jehovah Witness does is the equivalent of one year of college. She feels that she would very much like to take a high school equivalency test "just to see" and doesn't think it would be too difficult to achieve.

Though Mrs. Bell s life has been troubled in marriage, health, and children, she continues to look forward to learning and contributing to the enlightment of others. As she puts it, "Life is dull if you're not giving, isn't it?"

Reflecting on the case study experience, Mrs. Bell thought the cognitive profile exercises were the most important because, "Perhaps it might show an ability or a disability that I would not be aware of before." She also thought the summary was very revealing. "Well, when you sit down and read something about yourself, then you kind of wonder - do I know myself really as well as I thought I did?"

During this final follow-up session, Mrs. Bell talked extensively about a concern she has about her inability to establish close friendships, especially after being hurt deeply by a recent break with a friend.

> I hesitate very much to develop any close friendship with anyone. This bothers me quite a lot because the Bible says that you should not judge people. It's the point that I don't want to get hurt again.

Case Study

Mr. Bolduc

Mr. Bolduc is a 49 year old Franco-American who lives with his wife and young son in a small rural community in Northeastern Vermont. He has completed 5 years of formal education and enjoys a modest income generated by a number of part-time jobs ranging from justice-of-the-peace to town dog catcher. Mr. Bolduc's health is poor due to a hereditary disease that has dominated much of his adult life. This disease, a kidney disorder, has forced him to cut back many of his physical activities. Nevertheless, Mr. Bolduc remains active in local civic events such as the Democratic party, Grange and Eastern Stars.

As a young man, Mr. Bolduc was forced to curtail his education at the end of the 5th grade due to the death of his father. The family farm needed tending, so at age 12, he abruptly entered the domain of adulthood.

Mr. Bolduc continued working on the farm, helping his mother with the many daily chores, until it was sold several years later. The family then moved to a nearby town and bought a new farm. Again, as before, Mr. Bolduc resumed the management activities associated with the farm.

Soon after moving to the new farm, Mr. Bolduc met a local man who served as the town road commissioner and was offered a part-time job during the day as a road laborer. This job apparently intrigued Mr. Bolduc as he recalled, "I took pride in learning the ins and outs of roadbuilding, and how to operate the different equipment used on the road." Mr. Bolduc continued working this job over the next 15 years.

During his work on the road, Mr. Bolduc grew closer to the road commissioner's wife. She was a school teacher by trade and took special interest in seeing to it that Mr. Bolduc continued his education. She introduced him to a self-study program and helped him with his studies on a regular basis. Mr. Bolduc spoke glowingly of the road commissioner's wife in these words, "She was a tremendous person, almost a mother to me. She took an interest in me and helped me become a better man. I'm deeply indebted to her for that." When she died some years later due to a tractor accident, Mr. Bolduc referred to this loss as "a terrible time. I lost someone very close to me --- as close to me as my mother."

Looking broadly over his life, Mr. Bolduc recalled 22 significant events and clustered these into 6 broad categories. The categories were (1) Growing Up and Working (2) In Armed Forces

(Korean War) (3) Getting Married and On-The-Go (4) Personal Health Complications: Kidney Related (5) Shock - Associated with Death of Close Friends, and (6) Choosing and Doing New Profession. The time-span in each category varies with the first two being 8 and 3 years, the next two being 4 and 7 years respectively, and the final two being 1 year and 8 years in length. Mr. Bolduc described in varied detail the many events and activities associated with each time-span. He talked of his early years as ones filled with hard work. "They were good years," he recalled, "I just worked hard all the time." The last few years, however, have been characterized by a decline in his body function. His kidneys have continued to deteriorate to a point where, last year, Mr. Bolduc received a kidney transplant. Yet even though his life today is dominated by poor health, Mr. Bolduc remains active and in good spirits serving his Local Township in a variety of civic capacities.

Reflecting on a crisis or tragedy in his life, Mr. Bolduc talked about the time when he and his wife learned that they could not adopt a child. Apparently the adoption agency was concerned about the child's welfare because of Mr. Bolduc's poor health and consequently denied the application. Mr. Bolduc recalled his reaction to the news this way, "It was a shock to me because I always liked kids. Well, I didn't know what to do. I didn't want my child to go through what I have (hereditary kidney disease) so I was sort of lost for answers for awhile." Mr. Bolduc coped with this ordeal "by doing a lot of thinking." He asked other people who had adopted kids for their opinions. They, like the adoption agency, said that he needed to be in good health and financially well-off. Looking back over what he had learned from this conflict, Mr. Bolduc offered the following: "I learned that in life there's ups and downs and you can't always have your own way. Throughout life, there's crisis and sickness, and sickness is a burden you have to learn to live with." Fortunately, however, there is a good ending to this crisis, as Mr. and Mrs. Bolduc now have their own 3-year-old son in perfect health.

Initially in describing himself to himself, Mr. Bolduc found this task difficult to do. He displayed a marked sense of uneasiness while offering the following, "That's pretty hard to describe. I don't know how to put that into words." After a few examples were given by the interviewer, Mr. Bolduc returned to a relaxed state and began his description by saying "I do have a temper." He went on to say how he enjoyed people and how he liked to make them laugh. He described his everyday demeanor as "easygoing - I don't get riled up too much unless someone really aggravates me." Describing his affection for other people he said, "I like to help other people out, if I can - if they're in real trouble. I think it's a good policy to help your neighbor when they're in need. I think it makes for better understanding also!" Overall, Mr. Bolduc saw himself as an honest, hardworking fellow. "That's the one thing I've tried to be all my life," he said. "I think honesty is a pretty good policy!"

The recent learning efforts of Mr. Bolduc are a mixture of hobby and school related tasks. For example, he is busy learning more about his favorite hobby - bird watching. This effort is rooted in the past, when as a boy, Mr. Bolduc was intrigued by the beauty and natural habitat of birds. It is only recently, due to his kidney illness, however, that he has been able to devote time to their study. Mr. Bolduc talked passionately of the beauty of birds, noting in detail the various color combinations of some types, and how different species go about their daily business. When he sees a new bird that he doesn't recognize, Mr. Bolduc consults a variety of sources for the answer ranging from his neighbor (who has a similar interest) to authoritative books or magazines on the subject. If the answer is still not found, he sometimes consults with the local game warden for help.

On the school-related side, Mr. Bolduc is enrolled in the local ABE (Adult Basic Education) program working toward his high school diploma. This is something he has long wanted to do and, like his bird watching hobby, is rooted in the past. Mr. Bolduc talked about how, as a boy, he felt something missing in his life and how he felt inferior to other people more educated than he. "I always felt sorta empty" he said. "It's not that I can't do things or figure them out. It's just that I coulda done 'em faster if I had more education. You know, education can save you alot of mistakes although I do feel experience is a great learner." Mr. Bolduc went on to describe how because of the time he now has, he is working toward becoming more educated. He is taking writing and spelling lessons with the local ABE program and talked of how proud he felt of his accomplishments. "Sometimes" he said, "I get frustrated by how long things take. But I am making progress and that's a good feeling."

Commenting on who or what shaped his learning, Mr. Bolduc spoke about his recent kidney illness as the dominating factor. He described learning as a continuous process - an everyday matter - dependent on how one physically feels. "If you feel good" he said, "learning comes pretty easy. But if you don't, then it's hard. You can't do as much if you've got to put your mind on other things - like your body or life and death. I do try to remain positive, though!"

In reflecting over how he tends to think, Mr. Bolduc described a systematic, step-by-step process. He talked of beginning with a vision or an image in his mind. This image might be triggered while traveling or lying in bed. As the image takes form, Mr. Bolduc often commits it to paper but sometimes, keeps it to himself. "I sometimes store things away for awhile" he said, "before doing anything with 'em." Then later on, as a need develops, Mr. Bolduc recalls the idea and begins active work on it. He talked of consulting with local friends or experts for their ideas. Sometimes he looks at existing models for comparison purposes. Other times, he consults a magazine or article. "I usually have to see it [though], before I can do anything."

Once the various ideas are collected, Mr. Bolduc then begins to work on the project in question. When asked to describe this thinking process, Mr. Bolduc called it "circumstantial learning" based on empirical observation. He definitely prefers the logical, step-by-step approach because of its efficiency. Mr. Bolduc described the virtues of rational thinking this way: "It's better since it reduces any problems or mistakes. It's better to go slow - saves time and means not having to do it all over again."

Overall, Mr. Bolduc appears to be a visual thinker. Images or forms hold the key to his problem solving process. As he related earlier, "I usually have to see something before I can do anything."

Peering into the future, Mr. Bolduc talked of traveling around the world and meeting different people. He'd be interested in their different ways of life and the places they lived in. "Guess I'd start in Canada!" he said, "then travel to the Far East and then on to Europe, Africa, South America and then back home." Mr.Bolduc thought he would keep a journal and take many pictures of his odyssey and saw his effort as "a great way of learning."

As for any untapped potentials or strengths, Mr. Bolduc stated that he didn't know what they would be. "They are things that come as I go through life. If I feel better tomorrow, I may have more ambition than I do today." Here, as before, Mr. Bolduc's kidney illness shows its dominancy once more.

Looking broadly at Mr. Bolduc, he appears to be a fighter, one who will not give up. He prefers to do things on his own but possesses a deep desire to serve his community and his state. It is through this service that he may acquire the will to go on. Nevertheless, through good times or bad, Mr. Bolduc is searching for new truth. As he related toward the end of interview, "You never get enough information. The more information you have the better you are able to ask questions. And that is absolutely essential to good learning."

This case story was read to Mr. Bolduc during the follow-up visit since his health had declined rapidly and he was now virtually blind. After the reading he commented, "Don't see anything out of whack - sounds accurate to me. In fact, it sounds pretty good!" When asked to comment on whether the experience has been helpful to him, he replied, "Yes, I think it's been very educational for your part and mine. Also, it may help other people improve their lives."

CASE STUDY

Mrs. Desautel

Mrs. Desautel is a Vermont woman of French-Canadian descent who still lives in the small rural town she was born and raised in. Now twenty-four years old, she lives with her husband and two young children in a neat and practical duplex on a hill near the center of town. Mrs. Desautel, recently self-educated as an income tax consultant, spends the rest of her time raising her children and helping out her parents in the retail end of their butcher shop. Her husband owns and runs a small-scale milk delivery business, and the added income enables them to live a fairly comfortable, though busy, lifestyle.

Midway in a family of five, she enjoyed working for her parents. Happily engaged on high school Graduation Day, she was married five months later. Following the premature loss of their first child, Mrs. Desautel returned to work for recuperation and companionship. Several years later, her husband set up his own milk-trucking business, and shortly after they celebrated the healthy birth of their son. During the next two years, she worked frequently for her folks, became increasingly interested in sewing and holiday crafts, and carefully attended her second pregnancy. Following her daughter's birth, Mrs. Desautel and her husband decided not to have any more children, in order to continue doing things for themselves and to be able to spend more time together as well. The ensuing years have been busy, and although she admitted to relaxing in the summer with her children, she took a sewing course, continued making crafts, and babysitting local children. Last year, she made the big decision to take a tax preparation course. Despite her fears, she found it interesting, enjoyable, and highly practical for her husband's business. During this time, Mrs. Desautel also decided to get involved teaching catechism to young children. An active, thoughtful, and generous woman, she continues to marvel at her growing children, even when harried by community commitments.

In recalling her life, Mrs. Desautel described 16 Milestone events, which she divided into 4 thematic categories: (1) Exciting; (2) Routine; (3) A Whole New Experience; and (4) Self-Fulfilling/Changing Times. Being relatively recent, Mrs. Desautel spoke about the events clearly and easily, and gave time spans for each theme of 1, 3, 2, and 1 year respectively. Mrs. Desautel was immediately struck with the fullness of her life to date, and seemed surprised by her current educational interest when compared with her previous school memories. One learning from her early working years of "being in the public" was an enjoyment of meeting people. Being married involved "learning that other people are different." Mrs. Desautel recalled with gratitude the help of her parents and especially the support of her husband, who later encouraged her to do things for herself. "He's not a chauvinist," she noted, "he just says 'if you feel it helps you, go ahead and do it!'" Having children involved many significant learnings, as she states, "everything was learning from the start of being a mother on .. learning the ups and downs of life!" As her children grow, she tries "to experience it with them so that I can see why they reject certain things, and get into doing certain things..." Recent learnings have centered around doing things for herself as well as husband and children, learnings she calls "self-fulfilling." Going back to school and teaching catechism were "fulfilling my own necessities, I guess. I do feel self-fulfilled because I feel that I'm still doing things for others but I'm helping myself at the same time."

Speaking about a time in her life that was difficult, Mrs. Desautel returned to the loss of her first child. The hardest part of that crisis, she felt, was never realizing something like that could happen to her. As the shock wore off, she found herself talking to people and thinking out what she would do. "It took me six months of thinking - wondering and planning what I'm going to do next - especially when you think you have your life planned." She had to "get out of the empty house," she said, "and find something to take my time up. I said I was going to do it so I did it." About herself, Mrs. Desautel learned that "I could live through something like that. 'Life must go on.' You can almost forget about things you think you would never forget about. You put them in the back of your mind and don't make them the main topic of life."

Overall, she learned to look on both the positive and negative sides of an event, "not to live for something you expect is going to happen." In learning not to build her hopes up, she felt she also gained some independence. If she plans to do something and her husband can't get time off, "I'll do it anyway - life is too short to wait." With her new outlook, she notes, "I'm not disappointed if it doesn't go through. It's not a 'down on life,' that's for sure."

This interest and determination in experiencing life is reflected in Mrs. Desautel's description of herself. "I guess I am the type of person that if I put my mind to something, I'm usually going to accomplish it." She sees herself as someone who enjoys doing things for herself and others, but honestly admits she sometimes gets "sick of doing things for other people. I'm almost contradicting myself, but that's the way it is." On the negative side, she's aware of her own impatience. "I'm getting better though," she says. "I've been practicing. Patience is a virtue but I never got any of it. I've been getting pretty good though, not trying to rush life quite as quickly as I used to."

Though Mrs. Desautel is concerned about impatience, her learning efforts suggest a practice of both patience and practicality. Her primary motivations are interest, and usefulness. She states, "if you find that it's going to help you or if it's something that you like in the first place, you're going to go through with it."

Both her skill at various crafts, and her most recent learning effort of Tax Preparation are fine examples of learning to do things for herself that will ultimately benefit others. She usually goes about starting projects in a well-organized fashion, reading books or pamphlets on the subject and locating experienced people to talk with. Taking the tax course was a big decision for Mrs. Desautel, and she began by carefully researching cost, travel, and course content by calling the teacher, and then talking to other people at the school about the course. She registered, and promptly received texts in the mail that were "baffling." The course work was very hard, but she felt better on the first night of class when others said they didn't know anything either. She decided at that point "I was there to learn." Later she was under considerable pressure from parents and friends to drop the course. But she persevered, and when it became difficult to find time to read, she made a study schedule and stuck to it, "I figured I wouldn't get anything out of it unless I put time aside." Mrs. Desautel successfully completed her course and was asked to stay on and assist her teacher during tax season. Her competence eventually won the trust of her friends and relatives. She has begun getting set up for next year in addition to creating a "proper" bookkeeping system for her husband's business. "I feel that I'm not a lost cause," she said, "I can learn when I put myself to it - I feel more openminded, and more independent."

Mrs. Desautel thinks her general learning style was shaped by early educational experience. With a family history of people not graduating from high school, her parents insisted she go to a parochial school where they had none of the practical courses she was interested in. "I learned when I was younger because I had to, but I felt I missed alot."

The will to finish projects and to continue her education is another factor that's shaped her learning. "I've got to," she said, "there's an end to it, and I've got to reach that end and I've got to feel like I got something out of it. Otherwise, it's nothing to me." It seems that Mrs. Desautel has endeavored to make up for lost time in the past few years, and admits, "I never thought I'd ever look into another book again and I even took the tax course and that was textbooks - I bought books on sewing and I've looked into it more deeply than what I ever expected I would."

Looking generally at the type of learner Mrs. Desautel seems to be, it's apparent that she's a visual, ordered, logical thinker. "I like things to turn out good," she said, "and I have to think them through before I even think they turn out right."

Although she doesn't have a particular place in which to think, Mrs. Desautel usually finds she thinks while gardening or doing housework, she's also aware that the evening is a special time for thought, "that's when it's usually quiet around the house." She usually stores her ideas and returns to them later with the help of notes. She will remember certain chores by performing like-minded tasks. Sometimes answers to problems will occur spontaneously, as she says "all of a sudden things will come to me - like solutions or things I can put against other solutions." Usually these sudden solutions come in words, rather than pictures, and are often accompanied by feelings of "cold chills." Mrs. Desautel will also go through the Encyclopedia on occasion, especially when one of her children is sick.

She favors the rational "word-type" of thinking, saying "I have to plan things before I do them, have to think about them." This type of thinking differs from an earlier "spur of the moment" way of thinking and acting. This careful way of thinking came gradually. "In high school I was given more opportunities for responsibility - so when I got the chance, I started being that way ... I enjoyed it. When you think it out, you feel better about it. I feel people think more of me for doing it."

Looking into the future, Mrs. Desautel's first wishes for her children, "to see them grow up and make something of themselves, whatever they choose." Seeing some of her husband's dreams come true was also important, and for herself, taking a vacation to Colorado and Hawaii and ultimately, to build a new house, "from scratch, with no tenants!" Other practical desires involved more canning and freezing skills, and an interest in arts, particularly crewel. "I like to work with my hands - these things were never pointed out to me!," she declared.

Mrs. Desautel later stated that her own special dream was to teach retarded kids or handicapped children, and she spoke with feeling about how fulfilling that would be to her. "I'd be proving to myself I'd have enough patience, trying to teach them how life is - I'd be happy with myself if that accomplishment comes out of it." She's aware that further education would be needed in addition to speaking to people with experience.

Mrs. Desautel seems well aware of her own particular type of logical, practical, learning. This learning is increasingly applied in efforts to help others as well as herself. In addition, she seems to have an increasing awareness of herself as a resource. The most helpful person during this time, she said, laughing;

> was myself!! I asked people about different things and they'd never really say too much - like all my brothers and sisters, or when I was taking the course. My mother and father thought it was stupid of me. 'You've got a family, stay home with your family!' and I said 'to heck with you, I'm going to go out and do things for myself for a change!' My husband was always there. He thought it was good for me to take what I did but it wasn't anybody - it was me, I wanted to do it and I did it!

When she read her case summary, she was taken aback by the experience of seeing her whole life "in front of you all of a sudden." Further clarifying this she commented:

> I don't know, it's kind of - it's almost embarrassing....I'm not used to having things that happen to me, come back to me... The things we talked about were all pretty important, 'cause I never really thought back on the things that I did and why I did them and everything, so it brought thoughts out which I normally wouldn't have noticed.

CASE STUDY

Mrs. Field

Mrs. Field is a 34 year-old woman who lives with her husband and four of their five children in the middle of a small rural Vermont town. Across the street is the nursing home where she works. Their rambling house which they continue to improve as time and money permit, is shared with an elderly gentleman and a woman on 'home leave' from the state hospital. Mrs. Field has been working as a nurse's aide for four years, and finds time to do commissioned upholstery work in-between her backyard farm chores and making cottage cheese and butter for wholesale. Her husband runs a cottage industry finishing violin pegs, and their combined incomes allow them to barely squeak by, with little left-over for extras.

Born and raised in northern Massachusetts, Mrs. Field and her older sister were raised by her father and a housekeeper following her mother's departure from the family. She loved her early schooling, and remembers frequent square-dancing and visiting her father's mother, "Gram" each summer in the town where she now lives. Her father eventually relocated to this town during her freshman year in school. That year school changed dramatically for her. She was assigned to frustrating " 'special classes' just when I was getting the hang of it." Mrs. Field chose to leave school and home and get married at the age of sixteen.

Although she regrets not having finished school, she claims to have learned much from her husband. Her marriage was difficult and confusing at first, and the prospect of having kids was "scary." Nevertheless, she had three children in the succeeding three years. Although she "took off" briefly following the birth of her second child, her marriage stayed intact thereafter. As Mrs. Field noted, "I'm far from being an angel ... but I am growing up and I'm learning."

After the birth of her fourth child, the Field's moved to a southern Vermont town for a few years, during which time Mrs. Field picked up upholstery skills. This was also a time of experiencing some tough personal issues which needed resolving. She recalled spending some time trying to figure out who she was and how to be at ease with herself. Two years later her father died, and she still experiences strong feelings of loss. "With Dad," she said, "I could always go to him and talk to him about anything ... he'd understand."

Mrs. Field has spent most of the remaining two years "working stuff out together" with her husband and her family. She is grateful that her oldest son, whom she's had some trouble getting along with, had the chance he wanted to "get out and get on a farm" where he's now working and living and successfully finishing his high school.

Recently Mrs. Field has begun a slow and painstaking search for her mother. She is also anticipating the death of her grandmother, who, though she's the oldest resident of the town and ailing, is still quite feisty. Being near her aged grandmother has given Mrs. Field a great sense of life.

> It's like when we took the kids to the Halloween party at the Nursing Home. What a feeling! You're standing there and you got a whole new generation right in front of you and all of us - that was going to school - we're married, got kids, and a whole new generation.

In describing her life, Mrs. Field noted 15 milestone events which she separated into five overlapping categories. She called the categories (1) Good Old Days; (2) Confusing; (3) Scared Stiff (having babies)/Still Problems; (4) Trying To Put Self At Ease With Self; (5) "We've Come A Long Way, By God!"

The time spans for each segment varied, with the first two themes spanning one year each followed by a long family span of ten years, and ending with five and one years for the last two themes.

Mrs. Field spoke matter-of-factly about each of the themes, but gladly went into detail concerning her father, her marriage, and her search for her mother. She takes great pride in the furniture she's re-upholstered, but admitted she rarely finds time these days to relax, much less pursue a craft or her mother-search.

In her early years, she felt she learned about taking care of people and cooking from the grandmother she now takes care of. Getting married resulted in much learning. "Growing up and learning about life really! You either got it or you ain't! You learn alot about sex, especially not having a mother."

Another significant learning was connected to her learning to drive, something she never thought she'd do. "I've had my license now about three years, and from that I proved to myself that I could!" Most recently, Mrs. Field has been reflecting quite alot on her own growth. "I can see the difference. I've learned I still have respect for the olders. I've learned to stand on my own feet." This is important to her in case anything happens to her husband. Her husband has encouraged her in this development. "We're getting," she noted, "to where we're talking a little bit more to each other." Mrs. Field wants to continue working on communication skills, especially concerning her own feelings and attitudes, which previously she's found difficult to share.

One of the most difficult times in her life concerned facing and coping with her father's death, and more recently, the prospect of her grandmother's death. Even though her husband tried to prepare her for it, her father's death was a shock. At the time she felt life was cruel. "You grow up and you never figure on your parents dying. You think they're going to live forever." Even with her husband's support, it was hard for Mrs. Field to express her feelings and she often went off by herself at night and cried where she couldn't be heard. She believes that one of the things that was most helpful to her was her own philosophy of life - taking one day at a time. She tries not to dwell on the fact that he isn't around - something she still finds can bring her to tears. An important realization for her was the finality of life - that her father and grandmother would not always be there to go to.

During the months involving our sessions together, Mrs. Field's grandmother did die, an event she felt better prepared for than her father's death, facing it with "no regrets." She claimed, "I got a lot stronger in the last few years being around Gram. She was strict but she was good." One of the reasons she felt better about "Gram going" was the appreciation she received from her Uncle (a University professor) for the care she had given to his mother. "It made me feel great to know he cared enough to want my opinion. I felt part of the family for once in a long time."

Mrs. Field's initial description of herself was quite brief, and seemed to be a synopsis of the growing she felt she'd accomplished in the past few years. She stated, "I'm a deep, caring person. I care about others before I care about myself. I've come a long way." She feels she's learned to "give, not take," and was surprised to realize that she was able to continue giving to her grandmother for the past six years.

Probing further, she realizes she still has some self-discovery to do: "that's what I've got yet to do, is find myself." For her, this process is connected with finding her mother: "I'd think I'd find alot if I could find my mother." The prospect is also a scary one for her. "That's kind of a rut I'm in," she noted. "Some say leave it alone - some parts of you want to do that - other parts of you want to continue." The problem is not only in finding her mother, but facing the reality of another dead-end, or if successful, the possibility of rejection. Still, Mrs. Field is determined. "That's one thing I've got to do before it's too late."

This same kind of practical determination highlights many of Mrs. Field's learning efforts. In addition to improving her educational skills, she's endeavoring to improve her contact with residents in the Nursing Home by learning more about medical and organizational procedures and therapeutic activities for the elderly. Presently, most of her learning efforts revolve around household activities, such as rendering dairy products for sale, household records management, and upholstering, her favorite learning effort. In her upholstery work, Mrs. Field takes great pride in the fact that she can "tear just about anything down" and repair or rebuild it into something functional and good looking. She also builds items "from scratch" and can often create things merely from the description someone has given her. Most of her prize pieces have been sold or given away, but she proudly displayed several pictures she had taken of a chair in-progress.

Texas Hall of Fame, Africa. Scotland. Although Mrs. Field initially stated she has always wanted to be a farmer's wife, she now realizes she'd like to be a nurse, possibly in surgery, noting her "strong stomach" and her willingness to "follow through" with terminally ill patients. She also realizes the responsibility of that profession, and feels that even her current nursing skills can't prevent the anguish of seeing people suffer. Perhaps, she wonders, the future may even have a right-to-die nursing home.

To complete her goal of increasing her nursing skills, she'd "have to get know-how, a lot of know-how. It takes a lot of experience, a lot of responsibility. I'd just pick up some more when the opportunity arrives - learn by watching." Some additional learning also involves inventing and possibly marketing a low-salt cheese for older people.

In general, Mrs. Field has adapted to the type of learning that suits her best. She enjoys learning on her own, and at her own pace. She's done many projects that are practical, but seems to be beginning to test some of her other "career" goals as well. In many ways, Mrs. Field appears to be "coming into her own" with themes of freedom and balance. Efforts to find herself and locate her mother balance with practical considerations for improving communication at home and becoming more financially independent. As she puts it, "I'm growing up. I'm learning."

Commenting on how she felt about the interview experience, she stated, "I liked it. We talked over lots of stuff I used to take for granted." As a footnote, Mrs. Field has left her home and family. This happened shortly after her husband's "girlfriend," then living with them, gave birth to a baby. In the follow-up interview, Mrs. Field had talked about her feelings about the baby (whom she didn't want to "take in"):

> O.K., my husband's the father and
> the kids, they're half-brothers -
> so in other words, what am I to it?
> You know, I felt like in a way,
> an outsider...

Initially motivated by things that "needed fixing up" when first married, she later tried her hand at tearing down a chair, and eventually sought help from a course on upholstering. Feeling good about positive feedback from people, she works at this craft whenever she gets the time. Her learning strategy echoes earlier statements about taking one day at a time. She keeps a mental picture and record of materials needed, and keeps careful track of what she has used, saving the scraps for another project.

Upholstering is something Mrs. Field does by herself, seldom considering advice or help. She feels she's always had to learn things on her own, and thinks that people generally can "sit and be lazy or accomplish something." Once she starts a project, she feels committed to finishing it, and although she might have to walk away if she gets "stumped," she'll continue until it ultimately "looks right, without any corners or edges sticking out." Her stick-to-it-iveness comes from "within me," she states. "If it's something I like doing, I really kept with it ... you can't really give up." Learning activities like this mean a great deal to her personally. "If I let myself go and didn't care," she declared, "everyone else would be doing it too. If you get a chance to do something, do your best getting it done. If you're not satisfied with how you're doing it - just keep at it until you are - till it looks like what you want ... "

Generally, Mrs. Field's type of thinking seems to be both visual and logical. She goes about her projects in a step-by-step fashion "each day at a time," and has mental "word pictures" of what she thinks the outcome should look or taste like. Often, she tries out her ideas by trial and error, making several batches of cottage cheese, for instance, before she connects with the right blend of ingredients.

As a child, Mrs. Field "did things" more than thought about things. As in her past, she finds that being with people even now tends to scatter her thoughts. A time she usually lets her mind 'wander' is when she's outdoors, weeding or gardening. Reflecting on these times, she realizes she has done alot of thinking "about life." Some of the thoughts are sad ones, but she tries not to "pay much attention to my own problems." Lately, she says, "I've been thinking alot more for myself. I think I'm growing up some. My husband tells me I've changed since starting work - I'm more independent."

Thinking about herself in the future, Mrs. Field sees some of that independence connected to "just getting the bills paid - that would let me be a little more free." With extra time and money, she would love to "really get my hands on upholstery," spending extra money creating things she currently can't afford. Another practical consideration in the future relates to her children. She thought maybe, when her youngest turned eighteen, "that would give me freedom. I would like to go to dances. We don't because it's cheaper to stay home. Something in me wants to go out and enjoy life a little bit!"

Talking about her dreams, she admitted she would love to travel, and named several places she has wanted to visit ever since childhood:

CASE STUDY

Mrs. French

Mrs. French is a 44 year-old French-Canadian who moved to Vermont from Quebec eighteen years ago. A few years ago, she enrolled as an Adult Basic Education student to improve her English after trying to learn on her own for several years.

At the age of 14, Mrs. French left school (completing seven grades) to help out on the family farm. As the oldest of five daughters and two sons, she primarily worked with her father in the barn, enjoying the chance to work outdoors. "You work outdoors, fresh air, I feel really healthy." She named this time in her life "Great Time," a time of responsibility to her folks, with no pressures.

Five years later she moved into town to work in a mill and began to get ill from the conditions in that environment. She changed jobs, but when her health didn't improve after a couple years, she left and went back home to help her folks. She learned sewing from her mother which she was later to use in several jobs. This period of time, including working in town and returning to the family farm she names "Nice Time" especially since it involved meeting new people.

Two years later, she got married and had three children in the next four years. This period of time she called "Adjustment Time" referring to the difficulties of adjusting to married life with "a person who was very different from my father." Throughout our conversations there were many references to her father whom she greatly admired. For instance, she contrasted her father's frugality with money with her husband's spendthrift behavior.

When they couldn't make ends meet in Canada, they decided to move to a northern Vermont city at her sister and brother-in-law's invitation. Her husband began working in his in-law's gas station and later became a mechanic, changing jobs several times. Mrs. French stayed at home caring for her small children and for three years spoke only French. Before she had a fourth child, she became fatigued and quite ill with an ulcer, that had not been diagnosed by her doctor. He had told her that she was nervous with all the moving but didn't check on any other problems. When she gave birth in the hospital, she was too tired to care for the baby. The doctor gave her sleeping pills so that she would sleep continuously. Her sister helped her care for the new baby the first week for which she was grateful.

A year later they bought a modest home behind a downtown shopping area. At this time Mrs. French decided she wanted some money for herself, realizing that since her marriage she'd never had any money for herself. In addition to her four children she was also caring for one of her deceased sister-in-law's ten children. At a local sewing mill she found a job and a year later left that for a job in a furniture factory.

Another family crisis occurring about this time was associated with an accident. Her younger son's hand was caught in a piece of farm machinery while staying with her folks. For a month during the winter she made nightly trips up to the hospital. When she began to realize that he was developing a complex about his mishapen hand, she told her family not to bring attention to it and was relieved when this seemed to help.

During this time she was still not speaking English and felt it was a handicap to making friends and getting fair treatment on the job so she enrolled in an ABE English course. Shortly after, she found out that a Day Care Center existed and had been available for some time. She had been using all of her extra money to pay her sister for babysitting which also had created some animosity between them. From then on, she gratefully used the Day Care Center. This period of three years, involving the move to the states, her son's accident, her ulcer problem and beginning to work again she called "Hard Time."

A fifth child was born a few years later after an easier pregnancy which she attributes to Maalox and a new position in the factory which provided some exercise. That same year her older son went through several operations on his hand. She also began to have problems in her marriage. To make matters worse, her ulcer flared up and when the doctor couldn't stop the bleeding, she finally submitted to an operation. "'Well,' I said one time to myself, 'I'm too young, my kid is too young to take a chance to keep me like this'." She named this period of six years "Family Crisis."

A year after the operation which solved her ulcer problem, she began work in a furniture factory and a few months into the job she broke her ankle. Later, she was laid off her job and felt that it was for the best since it was too hard for her anyway. For a year she stayed home and sewed and then found a sewing job at a nearby drycleaners where she continues today. Because the job offers her some variety and a chance to move around, she feels she should stay there even though she's still paid a minimum wage after four years. Her boss has recognized her abilities and has given her more responsibilities but he won't give raises. "I don't know if I find another job like this or no. I don't know what I do." She typifies this last period of time as "Quiet."

Mrs. French faced a marriage crisis a few years ago when she realized her husband had a girlfriend. Even though she claimed she always tried to please him and even went out with him when she was very tired, he had found another woman. When he wanted to go out one night alone, she realized that he needed more attention. "I said to myself, 'I need to take care of my husband like a kid'." She made up her mind to win him back after crying alot at work. Without saying anything to her husband, she got her doctor to vouch for a week's sick vacation and worked at making her husband feel special. Every night she cooked a good meal and when her husband accused her of substituting that for sex, she said to him "After dinner, in the bed!" One week later he broke off with his girlfriend.

Within the last year, Mrs. French has had several new experiences that have challenged her and given her a new lease on life. During the months of our study she took a public speaking course and enjoyed the chance to increase her language skills and the courage to speak in front of others. Another course she took concurrently was "Human Relations." She encouraged her husband to get involved in this experience also. Mrs. French talks about how these experiences opened up a new world of dealing with feelings and is proud that her marriage has improved because of it. She claims that before these courses, she always kept things to herself and now she is verbalizing anger, frustration and love. Much of her conversation centers on the theme of love and how she has been able for the first time to tell her children and friends that she loves them. Apparently this sharing of feelings has had an impact on her husband who now considers her ideas and feelings instead of letting his strong will and temper control their relationship.

When she described herself to herself, she began by saying that she's very satisfied now, especially since she has discovered that she is very interesting to other people. She also likes people and realizes that one reason she hasn't made many friends is that she hasn't gone to people and initiated conversations. Seeing herself as basically shy, she realizes she has to make a special effort to talk with others. In fact, Mrs. French has begun to see herself as a person who likes to help others with problems and wants to learn how to be more effective at that.

One thing she doesn't particularly like is cooking and she traces this back to her early years when she worked with her father more than her mother. She lets her husband cook for special events while she organizes the meal.

She claimed that when it comes to cleaning she's sometimes lazy, although it's often because she has given 100% of her energy to her job. She'll take her time cleaning the house after supper, feeling that she doesn't want to be pushed, but also feeling guilty about not being "organized".

She claims she's courageous but doesn't like fighting, especially with her husband who has a hot temper. Instead of fighting like "many couples", she will talk to her husband after he calms down.

"When he's mad, you don't put the gas on the fire. Just let go and try to talk later. But my problem, I never try later - don't want to see the problem again -- I'm afraid to fight with him." Because of this weakness, she has decided to go with her husband to a "Marriage Encounter" in January, 1981.

Mrs. French tends to learn about specific matters that have personal meaning for her. When she suffered from an ulcer, she kept her eyes open for information about this health area and found several resources helpful including a pamphlet, the newspaper and T.V. After struggling to make friends and be understood on her job, she realized her need to learn English and responded to an ad in the newspaper for an evening course at the high school. She also was motivated by the fact that she didn't want anybody else reading her mail to her. When she wanted to redecorate a room in her house she looked through Better Homes and Gardens to get some ideas. Her motivations for the public speaking course and the human relations course were connected to a desire to improve her life.

Examining one learning effort in more detail - learning English - Mrs. French recalled that before she moved from Canada, she didn't realize it was important to speak English. Once she realized this, she knew she wasn't going to learn English by staying home, so she found a job. Fellow workers tried to help her speak but she knew she needed more help to learn correct pronunciation and how to write and thus enrolled in the evening English course. She worked hard, practicing her writing late into the night after housework was done and kids were asleep. To improve her speech, she asked her teacher and friends to correct her pronunciation. When she didn't have to rely on her brother-in-law to help with her visa, she was very proud. Her friends at work also noticed the difference and praised her, saying she was becoming a good listener, too. From this experience, she claims she has become a more confident and assertive person. Another result of this learning was the desire to learn more. "I would like to go to school everyday, but now I learn on the job everyday."

As stated earlier, Mrs. French was also quite affected by the subsequent courses, especially Human Relations. She claimed that before the course she was afraid to talk through problems with others but now she's trying out her new skills quite successfully. For instance, shen her oldest daughter came home from college for the summer and took advantage of the family, flaunting a life style that upset the family system, Mrs. French calmly talked to her about her options. "If you want to do what we want, (you) can stay with us. Well, you can do what you want, that's your choice. You (can) stay here or go out (take an apartment)." Her daughter stayed and was so happy that she told all her friends about the conversation. Realizing for the first time that parents need to treat their children like friends, she discussed how she shares her feelings now: "The words go out just like this and we try to explain to the kids. Before (we) just tell (them) 'Don't do that', and that's not really good. If you try to talking like friends, like you love (them), the feeling is better."

Mrs. French was aware that since this course she is "thinking better." Before the course she acted on impulse. But now "I take time to thinking before I do something." She also feels that it is time to learn more things since her children are old enough to take care of themselves. An obstacle, however, is that her husband doesn't want her to go out at night. As a way around this problem, Mrs. French has encouraged him to join her, which he has started to do.

Mrs. French finds herself thinking when she's alone washing dishes or sewing. During these times, "I try out what I think the answer (should be)." She tends to spend alot of time thinking through problems, testing out in her mind what she should say and do before she acts. This was evident in her consistent use of internal dialogue when she described how she found an answer to a problem. When a friend of her daughter's broke a pane of glass in their kitchen door during a fit of anger, Mrs. French thought through several approaches before talking to the girl in a calm manner, telling her she should work out the responsibility for replacing the glass with her daughter who was also involved in the incident. Furthermore, Mrs. French told the girl she needed to "put her anger down" and encouraged her to come and talk with her when she had a problem at home (parents are separated).

Overall, Mrs. French feels she thinks in a "step-by-step" fashion and favors this approach to the other "faster" way of thinking because in the step-by-step, "You're sure of it (the answer)." She feels that men tend to think faster than women, wanting to do things right away, whereas women take more time, "maybe scared to take action."

When Mrs. French thinks about herself in the future, she pictures being involved in helping others, (especially couples), with their relationship problems. Her experience at "getting my husband back," her new human relations skills and a recent weekend encounter experience have all helped her know how to listen to other people's problems and how to offer advice. Related to this scenario, she sees a big house, built by her husband which has a large room for family visits and meetings with people. Motivations for helping others with problems are "you feel good inside to help and it is preparing for friends in older age." She sees herself taking a course in helping people to listen and picking up some more examples of how people work out their problems. "You pick this up in your mind and you can use it."

Mrs. French wishes her children were living closer together so that she could enjoy the forthcoming grandchildren. She hopes that they will visit her often. Looking back on raising her children, she realizes she could have done some things better, like taking time to assure them of her love. Even now "something blocks me still in speaking to my kids." She realizes she has a potential for organizing and listening "without blocking a person." Thinking of her daughter's major in college, she said that maybe someday she'll take psychology also.

Assessing what the interview sessions did for her role she described the impact in the following way:

> Well, when I talk with you - that helps a lot, I guess. I really sure because I never did my story before. That helps me to know,me. And you know, my feeling is better too...that's the result. I just go all over back - you feel happy because you see, you re-see, you know what you did. Some is sad, but that comes in better too...

As a footnote,

Several months after the last interview session, Mrs. French attended the "Portraits of Adult Learners" Conference sponsored by this research project for the purpose of state-wide dissemination of the findings. While all Co-Investigators were invited, it was Mrs. French who showed up. At that meeting, she volunteered a personal statement of the importance of the study for her life, elaborating on the above quote. She also said that she was now working with her husband, helping him "tell his story," using the Milestone Exercise. In this way, she hopes that he can work out some of his deep-seated anger and frustration learning how to grow as she has.

CASE STUDY

Danny Keller

A 27 year-old master plumber, Danny Keller was born and raised in a small rural town in northern Vermont. He followed his father's urgings to become a plumber, like himself, and is presently in partnership with his father.

Danny Keller half-heartedly entered into the case study, but decided to "give it a whirl" after listening to a brief explanation. He usually came late to the interviews and didn't show at all a couple of times. The interviews were held during the day in a local restaurant. Twice the interviewer (a woman) tried to track down Danny's whereabouts by going to his father's office. His father said he would try to reach him which was successful one time. Danny's explanations about not keeping his appointments related to plumbing emergencies which needed attending to. The responses he gave to questions were brief, to the point, often humorous as well as caustic, but with a ring of honesty. An example of such an interchange came when the interviewer drew the milestone time line and stated, "Well, here's your life." Danny responded, "Yea, the straight and narrow!" Both laughed since Danny's life could hardly be called that.

Shortly before the end of high school Danny was involved in a motorcycle accident. Claiming he didn't want to lose his nerve, Danny got right back on. Today he owns a larger cycle which helps him save gas.

During his teen years, Danny got into quite a bit of trouble within the local community, hanging around with a tough bunch of guys and letting his quick temper have full rein. He named this time in his life as "In Trouble and Unsettled" and referred to the two-year span as "those violent young years."

It was also during this time that he began plumber apprenticeship training in night school but a year later was thrown out because of "state regulations." At the same time his father became ill and he took over his father's delivery of propane gas. He continued this job for the next three years and called this time in his life "Enjoying Job - Own Boss." The beginning of this phase was marked by purchasing a house in the country and raising animals for the first time. In this setting he began to feel more independent by growing his own vegetables, cutting his own wood and purchasing a tractor. He looks back at this time as "probably my happiest years. It's when I worked the hardest, but it didn't bother me so much because I was doing it for myself."

The third phase in his life began when he re-registered as a plumber apprentice and again experienced a hard time in his life. He recalls that he didn't know where he wanted to go and was given "kind of shit-jobs." Ready to quit, he was encouraged by his father to stay with it. Danny found it hard to meet people his own age in that community so he would go across the border to Canada. This period in his life he calls "Stagnant" and it lasted for two years.

With his journeyman's license, his life changed again. He bought a new cycle and a jeep and a year later completed his Masters plumbing training. Moving into a partnership with his father and selling his cattle and farm animals (which had become a burden) gave him a sense that "it's all going to come out all right." He feels differently about this time in his life in contrast to the past, because "It's a lot different than when you have to do something. If I have to do something I don't want to do it. Like I don't want to be told what to do and if I had to get up to go to work, I probably wouldn't."

More recently Danny has been investigating solar heat, educating himself with books and doing some experimentation with a friend. This latest phase he named "Finding What I Want To Do."

Looking back over what he had learned in each of the four life phases, he remarked "Well, in this first period, how not to be so damn wild." Asked if he was aware of being wild back then, he replied, "Probably, yea. You don't want to admit it, but you know when you're rebelling. You know damn well that you are doing something wrong. You know it at the time!"

Recalling the second phase in his life where he enjoyed his job and being his own boss he learned how to get along with different people and how to work hard for yourself. In fact, he said he wanted to do this kind of work forever.

During the third phase of "Stagnation", he reflected, "I guess one thing I learned is that if you're going to do something you might as well settle down and do it right!"

In the more recent period of "Finding What I Want To Do," he has learned..."to tell people what I think. If I think that a job isn't going to be, it isn't the right thing to do, I'll tell them. I don't like 'call back' jobs so I've learned to say exactly what I feel." This statement connects with a story he related about not "ripping off" people, especially the elderly, by convincing them to buy a system they don't need (as he feels others often do). When asked where this honesty comes from, if it's related to maturing, he responded, "Yea, I think getting more mellow - not quite so wild. I still get mad, but not like when I was young, when I just would fly off the handle at anything."

A particularly difficult time in Danny's life was during the first summer after high school. He was getting into trouble all the time, thinking "it was a big joke." "I was getting into brawls, jailed a couple times - more than natural, more than the others." His reputation for trouble grew and even his father "got sick of it." About this time there was a shooting involving a community leader and everyone thought he had done it. When the father of the boy who actually did the shooting (an acquaintance of Danny's) accused Danny of the deed, he was questioned intensely by local and federal officials. He proudly claimed that during this interrogation he didn't "squeal" on the real culprit. By this time, however, even Danny's father was convinced of his son's guilt. Though later exonerated Danny claimed that ever since this event he was watched carefully and "my reputation was known." From other conversations with Danny, it appears that he has "mellowed" somewhat since his teenage years and now has a respectable job in the community. However, the concern for "reputation" is still present, as if he is still haunted by his early history.

Danny sees himself improving this time. "Anybody that says that they don't have any room for improvement or whatever, they're kidding themselves." He also feels that his life is now going quite well (though he is in the midst of a divorce). "I think maybe they're going too good; there must be something that's going to happen!"

He can't see any major changes happening for awhile, but knows that an ongoing task is "working on improving my temper." This is especially important for the kind of work he does (the following is verbatim excerpt).

D. Well I have to deal with alot of other people and basically I don't like people, but, that's why I have to work on my temper. As far as I'm concerned, like what I told you before - I just retire and be alone on a farm or something, that's -- I've had so much -- ever since I can remember, I've had to deal with so many people; the public - that you just get sick of it actually, after awhile .. alot of them anyway.

I. You see yourself as a loner?

D. Not really - just .. I definitely could not live in a city or something like that, know what I mean?

I. You couldn't?

D. No, I'd feel crowded with people.

I. When you say you have to deal with people alot - that sounds like most of that is frustrating or is not a positive thing to you. Is that true or is that the nature of your work or..

D. Yeah - anybody that's in my line of work - or that has to go from house to house and deal with alot of screwy people, stupid people. You have to be kind of a weirdo 'cause it just -- does get on your nerves some of the time.

I. You don't find any that are pleasant or ..

D. Oh yeah yeah - I'm not saying that.

I. O.K., I was just wondering.

D. No, alot of people are alot of fun to work for but then you hit one that you just can't please and they don't know what the hell they're talking about - they think they do! Well it just gits to you after awhile. They think things should be done one way and you know damn well they shouldn't. They ask stupid questions - alot of it's going over to somebody's house and they've been listening to somebody don't know what the hell they're talking about...so they try to make you think they do.

I. O.K. - anything else that you know about yourself - maybe other people don't know.

D. I don't know - like I said basically, I like to be alone.... but I'm not really a hermit or anything like that. But then in this day and age, you have to have a few people around. Pretty hard to live by yourself!

I. You feel like when you have a break from your job or from the people - that that is a nice little vacation - that it helps?

D. Ummm - guess you're ready to go back and face 'em again.

I. I think that's really true of alot of people -- (Danny interrupts)

D. Most of 'em.

I. -- who're working in the public somewhere. What do you think you really value - what's important to you? -- that part of yourself.

D. Ahh - what do you mean?

I. Well, things that you really feel strongly about - ideas, beliefs or concerns..

D. I'm concerned about most people - let's see, how shall I put that -- other people are too concerned about other people, instead of minding their own business. That really gets to me! They know more about your business than they know about their own.

I. Is that sort of typical of being in a small community or setting?

D. I think so. Yeah I think you're right there. Don't have nothing else to talk about - they talk about you.

I. They need some excitement. O.K., so deep down - sounds like you like yourself.

D. Sometimes - most of the time. Sometimes I get mad --

I. What do you - if I could ask - what do you do to improve that or to get a handle on it?

D. Just try -- just think before you say things. I've always had that problem.

In further elaboration, Danny claimed that he works on his angry feelings by talking about it to himself, when he's alone. When asked if he tells himself off he replied, "Yeah, I try to be objective. Sometimes it's hard, but I try." Danny doesn't stay angry long, like "some people will stay mad for years!" His conscious effort to work on his temper, dialoguing with himself to cool down or thinking twice before he blows up has been a significant learning experience for him. He feels that even though expressing your anger makes you feel initially better, "sometimes you could kick yourself for saying it."

One of his self-directed learning efforts that he particularly recalled was tracing wires on electrical circuits for clients in his plumbing business. After a particular electrician "got canned because he had an awful mouth," Danny began to pick up some work in this area and was pleased because it fit so well with his job. He first consulted some books on electrical circuitry and then asked some people for help. He then started hooking up some electrical water heaters, "using my common sense and checking myself step-by-step." In high school he didn't get any "trade learning" so now he is "taking the courses on the job." Besides, he claims that he learns better this way rather than from teachers who "preach at you." However, he does go to people who are experts in their field. "Being stupid is when you don't ask questions." When people ask him about this new skill of his, Danny will tell them if he likes them or "if they are not trying to take a job away from me." This learning project taught him patience and pride in the fact that he could finish a difficult job without depending on other people.

Overall in his projects, Danny tends to think about something, then do it. He remembers being told by his parents, "Think before you act!" Even though this has been a difficult skill and attitude to develop ("because I don't want to waste time"), he now realizes, "It's foolish not to think about it. People who don't, get into a hell of a mess."

When Danny is on the job, he concentrates on what he's doing so that he doesn't "goof up and pay for it later." However, when he's driving or sitting around by himself drinking beer, he tends to be thinking. Sometimes if something is bothering him, he wakes up at night thinking about it. While he claimed that he tends to rationally plan something step-by-step, he does have "spur-of-the-moment" ideas when something non-rational comes to him. This usually is in the form of a picture as in the case of solving the problem of troublesome neighbors who were driving over a corner of his property. After several warnings brought no response, he came up with an inventive solution. He pictured in his mind a load of dirt dumped right in his neighbor's trespassing trucks When it worked, he was very pleased.

On the whole, Danny thinks that he is becoming more rational as he gets older and is "mellowing out." However, he does feel that women, as a rule, are more rational than men because they think more of the consequences of their actions.

Danny dreams of retiring early in a "place back in the woods where I can putter around, fish, hunt, with nobody to answer to." He would enjoy a simple life style, perhaps at one point travel to Alaska just to see if it is as beautiful as the films portray it. In the future he'd like his business to be financially secure, from the expansion into solar and coal energy. He wants to be happy and alive. He realizes that every day "you run into something different and if something new "popped up that looked feasible," he'd try it out.

He sees his interest in solar energy continuing to be developed, mainly from informal learning and whatever books are available. While he wouldn't go to "a regular school" to learn more about this area, he would attend a small group meeting in the community.

Summing up where he goes for help when he's learning something new, Danny remarked, "Whoever I find that knows what they're doing. I try it out if the advice seems logical."

CASE STUDY

Mrs. LaCroix

Mrs. LaCroix is a 44 year-old Franco-American woman who lives with her husband and 21 year-old son in a 12 year-old modest but tasteful ranch on the outskirts of a small Vermont village. Her husband and son work in a local mill while she is presently working for her sister in a home-based upholstery business. Their combined incomes allows them to have a comfortable lifestyle.

The second child in a family of twelve, Mrs. LaCroix quit school at age fourteen (8th grade in Canada) because her mother needed help with the large family. She began working at age sixteen and worked a few years in garment factories before getting married and moving to Vermont. Learning English was a major task during this time and she did this mainly by watching T.V.

After four frustrating years attempting to get pregnant, she finally had a son and began sewing at home while her husband worked in a furniture mill. When her son was about five, she worked as an aide in Headstart. A few years later she also began working in the mill and moved to their present location, building their own house. Gardening became an important pastime, especially raspberries and strawberries which they sold locally. Two years ago, she quit her mill job after working there eleven years and went into business with her sister, now in much demand for their high quality upholstery. On the side, she also sews many arts and crafts objects, sold at church bazaars and she bakes wedding cakes locally. A hardworking, industrious woman, she just recently celebrated her 25th wedding anniversary with her husband by taking their first vacation trip.

Recalling the significant Milestone events in her life, Mrs. LaCroix talked briefly about twenty-one events and divided them into four main periods in her life. These time clusters she called (1) Childhood, (2) Honeymoon, (3) Family and (4) "Home - Settling In." Different time spans were connected with each period, the first two being brief spans of four and three years respectively with the family phase being nine years and the last one being eleven years. She became the most animated when she described the year that she and her husband bought land and built their own house. Starting a garden and growing strawberries and raspberries were also particularly exciting for her. She talked at length about her experiences during the vacation to Acapulco which became a significant, cultural eye-opening experience for her. The living conditions for most of the natives there were particularly shocking to her. Later, after the interview session, she revealed a source of personal pride and pleasure by showing the interviewer all the crafts articles she makes as well as some furniture she had re-upholstered. These were varied, inventive and of high quality.

One thing she said she learned early was to be able to share with people. Living with twelve brothers and sisters taught her to share everything. Another significant learning was connected to her "Honeymoon" period. "I had to learn to live with somebody else - with a stranger!" When she reflected on the period of raising her child she said that it was a great learning time, watching him grow every day. "That must be the time that you grow the most. You know you have to - when you're responsible for somebody else."

A particularly difficult time in her life was during her first few years of marriage when she wanted to get pregnant. Becoming depressed with each menstrual period, she finally went to a doctor who gave her hope. What seemed to be important about that event was that she trusted that the doctor would help her. "Well, I was confident when I went to see the doctor - you know, that he would help me." She was reluctant to talk further about this time, although I sensed it was a very significant time for her. Later, she mentioned that one of her unfulfilled dreams is to have more children.

In her own description of herself, she presented a mixture of strengths and weaknesses. She likes people and meeting new people, although she is nervous in such encounters. Also, "I am patient and get along with almost anybody. When I do something, I like to do it good, not half done." This is confirmed by her fine craft and upholstery work. On the negative side she claims, "I'm not good at remembering things. I'm not good at dieting." Her self description was brief and to the point.

In other conversations Mrs. Lacroix brought up two other concerns she has about herself related to communications. Often when people are talking to her, her mind is on other things and she often asks people to repeat themselves. Also, when they're talking she thinks of something she wants to say and then forgets it by the time they're done. In probing this further, it seemed that part of the problem was an overactive mind, and a tendency to not focus on the presence and words of the other person. In discussing ways to work on improving communication, "Marriage Encounters" was mentioned and she stated her interest in attending a weekend encounter with her husband, as some of her sisters have done. In response to why this would be helpful she stated: "Yes, because I don't think we (she and husband) talk enough. We don't say what we think all the time. We're in a routine, you know, always the same thing every night - you have supper at the same time and you - everybody is tired, you don't say much and then you watch T.V. and you don't talk - I know what it is, but it's to get out of that...you don't know how to break out of it!"

While Mrs. LaCroix expressed concerns with her communication skills, she appears to have no problems learning in her favorite area - crafts. When she consciously decides to take on a new challenge, she directs much time and energy to learning the best way to accomplish it. As she said, "I wanted it to look great. I kept working at it until it was right."

She's often motivated by a church bazaar goal but also gets excited by just seeing a picture of some art object in a magazine and often decides to attempt making it herself. In describing her "learning by doing," she said "you learn as you do it...if you don't try you never learn." In describing the process she uses to plan a new learning effort, it became clear that she follows a very systematic approach. After she sees an object that catches her attention, at a bazaar or in a magazine, she tends to begin immediately to reconstruct it for herself. "Most of the things I learn, I see it before. I mean, I don't start something out of the blue!" Then, once she has chosen her colors and materials, she develops a prototype or model of the larger object in order to see if it looks "right". She seems to have a very discriminating eye for quality because she'll modify the design if it doesn't match her expectations. When asked what enables her to make such a decision on quality, she wondered if it just wasn't "in you". According to Mrs. LaCroix, everyone has something they're good at - a special talent. Her talent seems to be the ability to know what is quality by seeing it, even if the art object doesn't turn out like the initial picture she used as a model..."Well, if things don't come out right, I don't like it. Some people they can't see the difference, if it's done good or not. Sometimes it looks better though than I thought it would!"

Related to her discriminating eye is the ability to invent something new from odds and ends and scraps. She talked at length about fashioning a room divider from discarded table leg sections taken from a furniture factory where she used to work. She had been wanting a room divider for her living-dining room and when she saw how expensive they were, she decided to make one herself. Seeing the discarded table legs, she realized these could be used to construct her divider. She brought some home, cut them and made a prototype out of several pieces, stacking them up on each other. Liking what she saw, she proceeded to build a handsome wall divider with the tooled leg pieces. Mrs. LaCroix realized that she had invented something new. "I saw those legs and I thought of making that with it. Nobody else - I didn't see anybody else doing it. I mean, it was an idea I had."

Overall, Mrs. LaCroix tends to be a visual thinker and learner, utilizing her fine-tuned sense of beauty and quality in a systematic, logical approach to learning by doing. As she describes herself, "When I think of doing one thing, I think I see it before I do it - sometimes it doesn't turn out the way I see it, but -- ."

Mrs. LaCroix is also aware that she tends to think, daydream, fantasize when she is working - especially at tasks where she doesn't have to think about what she's doing. Other times that she finds herself thinking is before falling asleep and sometimes upon awakening. Her tendency is to respond immediately to ideas, but if she doesn't, a visual reminder of the thought triggers the memory. Although her major mode of thinking tends to be linear and scientific, she recognized other times when ideas or solutions just "pop out" unexpectedly. While these experiences make her happy because she "gets the answer" to a problem, she tends to utilize the rational approach more often. She claimed however, "One way is not better than the other."

Looking at herself in the future she could see more travel, especially to France and Hawaii. She hoped her son would find a nice girl to marry and have grandchildren. While she initially stated she was satisfied with her life, she later declared that her dream was to have a handicraft store where she could sell crafts in the summer, and travel south in the winter. Her sister-in-law is also interested and while they joke about it now, they are also "somewhat serious." One osbtacle in this desired future picture is that her husband might not like to travel, being a "homebody".

Learning that might be connected to this dream would be a course in small business management which had helped her sister in the establishment of the upholstery business. Other learning interests revolve around communication skills. After taking a self improvement course last year where she had to give a talk each session, she became aware of her interest in improving her communication with others. How to listen better is something she'd like to focus on now.

The self improvement course was a very positive group experience, building close friendships and a cooperative spirit. She would like to see more workshops offered in the community in crafts as well as communications, "maybe with small groups in homes."

In most of her learning endeavors, Mrs. LaCroix relies on her own judgment, but feels the need to go to somebody who particularly knowledgeable when she has a problem. She claims she's afraid to start something new, not trusting herself and thus deliberates for sometime before deciding to start a project. "I could take chances maybe. It gets worse as I get older."

Mrs. LaCroix seems to be quite aware of her strengths and weaknesses and is beginning to seek ways to improve herself, especially in the area of communications. A characteristic statement she made near the end of the interview in reference to the self improvement course: "I learned I have alot more to learn."

CASE STUDY

Mrs. Moss

Mrs. Moss is a 62 year-old woman, born in Vermont, who returned to this state with her husband 5 years ago after nearly 30 years of living and working in the Boston area. Their home, an old farm house neatly restored and self-landscaped, sits on the edge of a small town near the area where her husband's father was born. Mrs. Moss's husband, an airport shipping agent, retired early and Mrs. Moss left her nursing position so that they could "enjoy life" in their beloved Vermont. In addition to being very active in community and civic activities, they like to spend much of their time traveling or tending the flower and vegetable gardens and large raspberry beds. Selling raspberries brings in a little extra money.

Mrs. Moss grew up in a small town, and was the oldest of six children. Calling this a "No Problems" time in her life, she remembers working throughout high school. Upon graduating, the "country girl went to the city" breaking from the family's small town history. She accepted an offer to work as a governess for a doctor's family in Boston. That period in her life she calls her "Exploring" time. She returned to Vermont two years later to marry and spent only one weekend with her husband before he was shipped overseas. Calling this an "Adjustment" time, she worked at Montgomery Ward, during her husband's absence. When he returned, she relinquished her independent living and moved again to the Boston area. Several years later, following another move, they took in a six-year-old foster daughter who was eventually taken back by her mother. They parented a second foster daughter who stayed with them, and finally Mrs. Moss gave birth to their own daughter who now lives nearby.

When the children were 3 and 4 years old, Mrs. Moss decided to go back to work. Her husband didn't want her to work, but she was determined to continue developing a career. As an excuse to him, she claimed she needed "extra Christmas money." This period in her life she names "Putting Your Foot Down." Starting out as a nurse's aide, she soon progressed from delivery room technician to LPN, which she continued for ten years.

Around age 40 they moved again, building and landscaping their own home. For a change, Mrs. Moss tried working in a parts plant nearby and although she found it boring, she stayed on until the plant closed, calling it a "New Experience" time in her life. Two years later saw a return to nursing that was to last for fifteen years, the last ten of which, though at times "heartbreaking," took place in the Intensive Care Unit. She talked about this period as "Back to the Same Old Rut."

Five years ago they bought their present home, returning to Vermont. Completing a cycle in her life, she named this most recent period, "Back to the Beginning." Since that time, Mrs. Moss has read extensively, traveled, and researched area house deeds as well as family history. She fills in gaps with organ playing, crocheting, baking, and gardening. Recently retired as President of the Ladies Auxiliary of the American Legion, she's been asked to help the county design Vermont tours for Senior Citizens.

Mrs. Moss's life themes were rich in detail, and carefully linked to year, age, and type of work. She enjoyed dwelling on her early move to Boston as a governess, "not like the typical Vermonter who never saw the world." Her first ten years as a wife, however, had no theme other than "No Work." In her later years, Mrs. Moss especially liked describing her landscaping efforts with all their homes, and spent a great deal of time talking about life in the present. She claims she is "loving every minute of it."

In reflecting back over the years, Mrs. Moss has always felt the importance of people in her life - both as teachers and as friends. Presently, she feels she is also growing closer to her sisters. Significant learning times included marriage ("adjusting to someone else") and learning to "entertain and do things nicely" with the doctor's wife of her teens. Most of her learning experiences were in hospitals which was, "continuous, because something new was always coming up." In general, she learns from people, "You learn from all the new people you meet - everyone has something to offer."

A time of particular difficulty in her life occurred during the "same old rut" period when she went back to nursing. Mrs. Moss realized that her dislike of nursing at that time reflected her experience with the deaths of her husband's stepmother, father, and her own mother, all of whom she "special nursed", within a six-month time span. That same year, her daughter got married and although Mrs. Moss took a three-months' leave of absence, she returned to nursing with some difficulty. Because of all the deaths in her family, she became more emotionally involved than she wanted to be. Yet she stayed in the Intensive Care Unit for five more years, believing that work was a way to cope.

While these were difficult times, she felt the events helped her to grow and mature. "You realize it's going to happen to you someday -- if it happens it happens -- you're given understanding that way..." She also learned she could "face up to almost anything as well as anybody else." The most important thing she learned was not to put things off - to do or buy something one wants "before it's too late." She has tried to live this philosophy, stating that at this point, "We have done quite a lot with our lives."

In describing herself, Mrs. Moss reflected many of her earlier statements of contentment and satisfaction in her life. She loves her home, meeting people, learning new things, and wishes she had time to do everything she'd like to. She feels she's luckier than most people in marriage, health, finance, and friends - "Especially when I see the sunset." Another important thing was having a husband who puts up with "all my crazy ideas... to have somebody no matter what you do - want to do, that backs you up."

On the more negative side, she feels she is ordinary, nobody special, and has one frustration - not staying on a diet. In fact, at the end of this interview session, she apologized for "boasting" about herself and again mentioned how valuable and important her friends were.

Although she claims she is ordinary, Mrs. Moss's learning efforts are many, varied, and thorough. In addition to several hobbies of crafts and music, she enjoys creating parties, particularly by inventing games and writing skits and musical numbers. "It's a matter of researching -- and a lot of work, so that others might enjoy themselves or take a part." Similar ideas are reflected in her favorite learning effort, landscaping, one she's shared with her husband since they bought their first home. Their first chore was improving the yard, hoping to also please and inspire their neighbors. "It's great to do something and have it done well enough so that people are noticing the difference even though you haven't done all that."

Regarding her love for landscaping, Mrs. Moss felt she was always "a great person for color," and began noticing people's yards and flowers in her early teens. The dismal yard of their first home inspired the landscaping effort, and after some initial planning and local research, "We just went ahead and did it!" Growing trees were first, then flowering shrubs, and hedges followed by perennials, annuals, and fruit trees, as time and money would allow. The first plan was by no means inflexible and Mrs. Moss remarked that if they didn't like the place of a tree or bush, or it "looked unhappy," they'd move it - something she admitted their friends and neighbors even noticed. Since then, they've visited many other gardens across the country, and continue to read flower books and show off their yard. To Mrs. Moss, "It's just a continuous process that you'd like to keep working on, and if you find something new you think you'd like, add to it... I don't think I'd do it if I wasn't proud."

When asked how she goes about learning, Mrs. Moss notes, "If there's something I really want to know, I look it up. I'd go ask advice from somebody...there's always some people that know." For her, "The desire to learn something new or be interested in some new project or wanting to know more about what you're doing

...is something that you always have." Mrs. Moss feels that her way of learning has been shaped by something intrinsic. She believes that "It's something that makes you want to learn and do things. I think curiosity has a lot to do with it, too." To Mrs. Moss, learning is life long, speeding up rather than slowing down as she gets older and has more time.

In general, Mrs. Moss seems to favor visual thinking and learning, in which one idea leads to another and often forms "pictures" of answers or outcomes. She often finds weeding or housework to be a "beautiful time for thinking," and is aware that her mind seems to be always working. She seems to have her best ideas at night, especially when she can't sleep or "something's coming up," and that's been a pattern throughout her life. She usually tends to store ideas and come back to them but claims she has a memory "like a sieve," and also relies on verbal or visual cues. Mrs. Moss seems self-sufficient for most of her learning, and feels quite comfortable with books, libraries, and references. Otherwise, she relies on her husband. "Right now he's teaching me to be a treasurer - to write and balance checks for the Auxiliary."

Mrs. Moss adamantly defended her type of preferred thinking as non-rational. "I'm not a person that figures everything out... I'm more apt to jump in - not like my friends who do go step-by-step. I'm different....I don't need to have things written. Maybe just my imagination might be better." Mrs. Moss felt she'd go nuts if she had to do things step-by-step, writing plans in advance. "My thinking," she says, "really just happens," with one thought leading to another. Apparently, this way of thinking has been with her since she was quite small. She remarked that although the content of thought has changed, her methods have remained the same.

She used to be more of a daydreamer but present tendency is to deal with everyday ideas and concerns. "At my age you don't make too many long-range plans." Several years ago she'd been diagnosed as having rheumatoid arthritis which upset her very much. "I liked being independent...I want to do more, but that takes physical strength." Now she has no intention of slowing down to "curl up and dry up." "I learn to live with it -- you don't wait -- you have what fun you can." Mrs. Moss and her husband still plan trips together, and when her arthritis flares up, they simply change plans, and do things at home. This illness is something she doesn't talk about much, but it seems to accelerate, rather than hinder her "jumping in" style of learning.

Looking ahead to the future, Mrs. Moss initially saw life not much different than the present. "All I want is to be here, keep up my home, and be independent - still enjoying the things I do now." She'd like to do some more traveling, but stated, "I'm quite contented as we are." When asked why she would choose home over travel, she replied, "I must be happy -- here I have family and friends, I'm active in the community -- there's not much more you can ask for in life." However, she would like to get involved in more social projects for others (especially politics and religious activities) if she had more energy and strength.

When asked about doing something just for herself, she unveiled a penchant for the arts, hoping to excel in piano playing, writing, and especially painting. Mrs. Moss calls herself "a frustrated painter. I would love to have a lot of time to dabble with paints." She attended one year of art school, and claims, "If I could do it all over again, I'd go back..."

In order to realize her musical dreams, her chosen learning would be music lessons and "not being content just to entertain myself." She then broadened her scope of learning to include anything and everything, citing that she would learn anything if she had the chance, "not being afraid to pick up new ideas."

She is grateful for the serenity of Vermont after the hustle and stress of the city, and enjoys sharing that serenity with others. Dealing realistically with her illness, she still sets learning goals for herself. Her view of life's stages reiterates her feeling that learning is a life-long process. Every experience is valuable, whether early or later in life - because one makes it so.

> I think you enjoy whatever stage you're going through - I mean I don't think this is any more fun than it was then because I had a good time then. You certainly have a good time with your children watching them grow up, but at the same time, you learn to accept it when they leave. You find something to have a good time with...I am enjoying my life.

Reflecting back over the experience of the interviews she remarked, "It brought back your whole life." While she is careful to not put her skills and accomplishments above those of her family or friends, Mrs. Moss admitted at the end "I kind of think -- well, Gee, maybe I got a little more to offer people. I guess I never thought I did have, but maybe I do have something that might help others."

CASE STUDY

Mr. Paquette

A man of short but rugged stature, Mr. Paquette is a 63 year-old retired farmer of French-Canadian descent. He lives with his wife in a small rural community situated along the Vermont/Canadian border. Mr. Paquette has completed eight years of formal education and lives in a newly constructed home located close to the family farm. Although Mr. Paquette no longer owns the farm, it serves as a pleasant reminder of bygone years. The sale of the farm, along with seasonal odd jobs, allows for a modest but comfortable lifestyle.

As a young boy, Mr. Paquette lived a busy and hectic life. He assisted his father in operating the family farm doing the many chores expected of any farmhand. Some of these chores consisted of preparing the land for planting, daily milking and feeding of the livestock and in the fall, harvesting crops and putting them away for winter. Mr. Paquette spoke fondly of this period in the following words: "It was a time of growing. I was busy all the time with farm-related activities and I learned the basics of farm operation that would suit me well later on."

At the age of 14, Mr. Paquette left school to devote full-time to operation of the farm. Apparently the growing family business plus his father's failing health, necessitated this change. Mr. Paquette continued to assist in the operation of the farm with the death of his father some six years later. He then took over the farm and with his new bride, operated it over the next five years. During this period of time, he and his wife worked many long and hard days trying to improve the farm. They had three children: two girls and one boy. However, it wasn't until the birth of the boy that Mr. Paquette felt truly satisfied. As he related, "Having my first boy - that was a big event in my life. I always looked forward to that time and when it finally happened, I felt good and satisfied deep inside."

As the young Paquette family grew in size so did the family farm, the hard work paying off. Unfortunately, however, they were forced to sell the farm when a local city exercised its writ of eminent domain, purchasing the farm for its airport construction project. Although crushed by this event, Mr. and Mrs. Paquette persevered and purchased a new farm in a neighboring town, and worked it over the next 28 years. Then in 1970, they sold the farm because of poor health, escalating operating expenses, and the grown children leaving to work elsewhere. Mr. Paquette spoke warmly of this large part of his life:

> I always liked farming and although it was tough getting the new farm started and put in shape, it proved worthwhile. We always worked hard but there were good times too. I really can't think of a better place to raise children either. The only regret I have is selling the place before everything went up -- if we had waited a bit longer, we could have made more money. But the new owner is young and dedicated and that makes me feel good.

Reflecting on his life, Mr. Paquette spoke of two dominating themes. The first theme he titled "Working a Farm: Tied Down Period" and spans 40 years. The second theme which is much shorter in length (10 years) he called "Semi-Retirement: Period of Not Being Tied Down." This second period includes the present and will continue into the future.

In looking back over some of the changes he had seen in farming techniques and operations, Mr. Paquette spoke at length noting many improvements. He talked of the tremendous changes in equipment that made farming more profitable and efficient. For example, he had seen the hayloader come and go.

> Although I never hayed by hand, I did see the hayloader replaced by the bailer which made haying less time consuming and more interesting. I also saw the coming of the tractor. Originally, we farmed with horses. But when the tractor came, farming again became easier and better.

Mr. Paquette also talked of improvements in the quality of seeds, livestock breeding, and the way sileage is stored. Overall he noted:

> The trend toward mechanization, which means less manual labor, is probably the greatest change I've noted. The way farms are run today, what with all the new equipment and so on, makes farming a fun proposition -- something I wish I could start all over again!

Although times were usually pretty good to Mr. Paquette, he spoke of a time that was particularly difficult for him. It related to the purchase of the second farm. It was in decrepit condition, but with some work looked like a good investment. Mr. Paquette approached a local bank for help in financing the new farm, but was told that he was paying too much for it. Mr. Paquette was "taken aback." He felt jilted and questioned the banker's reasoning by saying, "You know land is going to appreciate in the future and while it may seem high now, in a few years, the value will be much greater." Mr. Paquette was told that the bank was reluctant to provide him a loan, but if he knew somebody that was respected in the community and would give a character reference, then O.K. Mr. Paquette thought long and hard and gave the banker a name. He remembered the story this way:

> Well I says, in Covensville there's Perron there, he's a farm machinery dealer and I knew he was one of the bank directors as well. "Well" the banker says, "we can't get hold of him, he's out in Florida and we haven't got his address." So I was kind of stuck there. So the banker gave me some papers to fill up and take down inventory of everything that was on the farm....so I did it. Well I brought that back a week or so afterward and the banker said, "Well, we don't need that. We got hold of Perron and Perron said,'If Paquette needs any money, you let him have it!'" So I mean, somebody got me out of a real jam. I was kinda worried for awhile but after the banker got ahold of Mr. Perron, everything was fine.

When asked how he coped with the initial bad news from the bank, Mr. Paquette talked of his self-reliant nature,(which would come through in other conversations.)

> I didn't talk much, except to my wife. I don't know, when something won't quite right, I always felt that I could solve it myself - maybe I didn't - I mean I kinda felt that way. Maybe if I'd asked more questions, I'd have got along with everybody, I don't know. If you go to some businessman and ask for advice -

> especially when you're buying property -- maybe he's got some property to see himself so, you might not get the right advice anyway. You know, you always have to solve your own problems anyways. I always felt that I was the one best able to do it and I did. My general rule of thumb is rely on yourself first and then others second.

Describing himself to himself was a relatively easy matter for Mr. Paquette. He cast a picture of an average person, simple in outlook and down-to-earth by nature. He talked of liking new things but also held a deep reverence for things of the past. "I'm a friendly person" he added, "I seem to get along with all kinds of people. If you kinda study a person, it's not hard to get along with them." Mr. Paquette also enjoys working and helping his neighbor with some of the farm-related chores. "I don't consider myself lazy, maybe sloppy, but not lazy," he proudly remarked. On the negative side, Mr. Paquette said that his stubborn streak sometimes gets in the way of progress. "I'm strongwilled, hardheaded and extremely stubborn. If I believe in something, I don't give up too easy. Course this streak, gets in my way at times." Overall, Mr. Paquette is basically satisfied with who and what he is. "It's too late to change. Anyway, wouldn't make much difference at my age and position in life, so I've got to be pleased!"

Mr. Paquette's recent learning efforts involve activities designed to make better use of his retirement time. For example, during the past year, he has been busy learning how to maintain and operate a campground. His son purchased the campground recently and asked Mr. Paquette to come and help. Not knowing anything about the maintenance and operation of a campground, both have spent countless hours learning the necessary basics. They have learned the basics through a variety of sources ranging from visitations to other campgrounds for on-site observations, to participation in short seminars sponsored by the area campground association. Mr. Paquette talked of this learning effort as "very interesting and satisfying. There's not a day that goes by that you don't learn some new aspect - you know, the campground has so many parts to it and you just have to keep at 'em. If you don't, they'll get the best of you."

Reflecting on how he tends to go about learning or solving a problem, Mr. Paquette said, "It depends on the situation." Sometimes he goes right at the problem, learning as he goes along. Other times, he's far more systematic, checking with local experts or consulting authoritative articles on a particular subject for answers. Summing up his learning tendencies, Mr. Paquette offered the following:

> Usually I go right at a problem and this helps me to learn. Learning by doing I guess you'd call it. Still if I don't have the answer, I'll ask others who know. There's no sense in making silly mistakes, especially if there's someone who has the answer. My rule of thumb is don't try to figure out for yourself, what others have already figured out for you.

Generally speaking, Mr. Paquette usually thinks in a logical, step-by-step process. He also uses mental pictures or images to help solve problems. Once in awhile, ideas seem to "pop into my mind." Mr. Paquette believes that if a problem is too difficult to deal with initially, sometimes a good night's sleep helps solve it later. "I know that when you are rested, you feel better and often answers come much faster. I suppose you might call this process, the 'power of the mind.' Sleep's a great remedy for many things."

Commenting on what thinking approach he preferred, the logical way is best. "I prefer the step-by-step approach because it saves time and has been proven to work. It also causes fewer mistakes. Besides, I always have a tendency to check with the experts first before making mistakes."

Mr. Paquette talked about the differences between the way men and women tend to think or solve problems. "Women are more emotional about things than men. They let problems worry them more and usually want quick solutions. Men, on the other hand, tend to be more practical and take more time to think before acting."

As for any projects that he might like to learn more about, Mr. Paquette talked of learning how to raise bees. A neighbor of his has been raising them for years, and Mr. Paquette has, for as long as he can remember, always wanted to "give it a try. I don't know anything about them, but now maybe I can. I think it would be kinda interesting to see how they work. Might even be profitable - who knows?"

Looking ahead to the future, Mr. Paquette saw himself at home, "not having to go anywhere." He talked of caring for the house, fixing it up and beautifying the grounds. He thought he would begin with new plantings of flowers and bushes. Then a fresh paint job and shutters. "I would enjoy that and get a great deal of satisfaction from it."

After staying at home "catching up" on things around "the place," Mr. Paquette fantasized traveling around the country.

> I'd like to travel first to Florida, back into the sun. From there maybe Texas or Arizona but I'm not sure. I just see myself leisurely traveling, taking in the sights and sounds of America. You know, it's a great country, and I'd really like to see all of it.

Overall, Mr. Paquette is a quiet, unassuming man, who expresses himself sparingly. Resolve and optimism are the watchwords of his day.

> When I quit farming, I felt that I had pretty much wasted my time. But after being out of it, I realized how well-off I was. I always thought that the other guy was better-off than me. But now being away from it for ten years, I've seen what others have done and realize what a good life I've had. The challenge now will be making the upcoming years as rich and satisfying as those of the past. I think they will be if I give it a try.

When he reflected on whether the interview sessions had had any impact on him, he responded with, "Think it has. Started to realize that myself is a little more important than what I thought originally."

CASE STUDY

Mrs. Petit

Mrs. Petit, a small, diminutive 73 year-old grandmother and recent widow, was born and raised on a farm in the Province of Quebec, Canada. Her husband worked for the railroad for about 45 years before he retired. They had eight daughters and raised a ninth child (female) as their own.

From a large family of eight, she remembers starting to work on the farm when she was eight years old. At about age 14, after completing eighth grade, she left school to help out with farm work. For the next six years, she worked hard but found it to be very repetitious and was ready to get married when her fiance proposed. She calls this time in her life "Very Long Time: Ready to Leave, Always the Same."

The second period in Mrs. Petit's life lasted for 20 years and includes birthing and raising eight daughters. She names this span of time "Hardest Time." When they were first married, her husband was part-time on the railroad. These were depression years and with a couple of small children, it was very hard to make ends meet.

Within nine years there were five children. Because of her husband's irregular hours on the railroad, Mrs. Petit was largely responsible for raising the children. She vividly recalls one crisis time when she was alone with the children. A hurricane of tremendous force hit the East coast and caused some damage to the house, frightening the young children when a large tree was uprooted and fell on the roof of the house doing considerable damage. Since there was no electricity back in those days, she remembers walking the floor with a lantern in hand throughout the night.

Shortly after the hurricane, the family moved to another city in Canada not far from their first location and spent several years in this town during which time Mr. Petit began working full-time on the railroad. After a few years he had the opportunity to be transferred to the U.S. which was a decision Mrs. Petit encouraged her husband to make. They crossed the border and moved to a northern Vermont city where they rented a house. When Mrs. Petit was again pregnant, they bought a house where their sixth daughter was born. Thirteen months later, a seventh daughter was born. Throughout these years, Mrs. Petit sewed all the clothes for her children, including winter coats, slacks and dresses. She also earned a little pocket money cutting hair.

Mrs. Petit recalls not having much time to socialize or travel, except for taking short trips on the train every year using Mr. Petit's travel pass. Passengers and trainmen alike made a lot of the little girls. Mr. Petit who had risen from brakeman to conductor by this time, was proud to present his family to his co-workers.

A year before their eighth daughter was born, the family purchased their first car - a Dodge. Although Mrs. Petit didn't drive, the car was used frequently for trips to Canada and to transport children to various school and social activities. The family regularly went to Canada for summer vacations, visiting relatives and spending time on the two home farms, having been sold to one of the sons in each family.

A couple of years after the last child was born, several of her daughters' weddings occupied Mrs. Petit's time as she made most of the dresses. These events marked the beginning of the third time cluster which she named "Missing The Children: Leaving The Nest."

Another important event during this period of time was moving to another house within the same town that was more conveniently located near the Catholic school and the church which the family attended. Mrs. Petit, a devout Catholic, was very pleased that she could now attend Mass every day. She was also happy that her daughters could return home for lunch every day since she realized they hadn't been eating their sack lunches when they lived at the other house. At this new location, Mrs. Petit continued her gardening, raising most of the food that was needed for the family. She also put up many preserves, pickles and jams from several kinds of berries. Picking the wild cranberries, blueberries and other varieties was something the family did together. It was a favorite pasttime of Mr. Petit's as was raising their own popcorn and shucking and stripping it off the cob after the first frost in the fall.

The first negative event on Mrs. Petit's time line was the death of a sister who was very close to her. Shortly after this sadness, she and her husband adopted a grandchild and began raising her as their ninth daughter. This child became very dear to Mrs. Petit, keeping her "young" in her middle years.

Soon after her eighth child got married, Mr. Petit suffered his first heart attack which forced him to retire from the railroad. After he recovered, he continued to enjoy working in his basement workshop and playing his fiddle, a lifelong hobby that had earned him many extra dollars during the depression when he played for square dances and weddings. He later gave that up to be home with his family but never "put the fiddle down" for long. Later, he joined the Fiddler's Association and more than once walked away with first or second prize in state contests.

The fourth period in Mrs. Petit's life began when she started sewing for other people. She calls this period "A Resting Place: Sewing 'N Sitting". With only one daughter at home now, she found she had extra time and filled it with quilting, braiding rugs, knitting, crocheting, making and altering clothes. Some of the twenty five quilts went to her daughters and their families and some won prizes at county fairs. Many townspeople value Mrs. Petit's work indicated by all the sewing jobs she is continuously given.

Last year her husband passed away after a year long fight with heart problems and cancer. They had been married for 51 years. Mrs. Petit took care of him at home during this difficult time. The one major learning effort for that year was learning how to care for her ill husband. She listened to directions about administering medicine from his doctor and followed these instructions religiously. Since her husband's death, Mrs. Petit's life has entered a new and different phase. She has taken several trips to visit daughters, flying on a plane for the first time in her 73 years. She also traded visits with a cousin she hadn't seen for many years, traveling to Western Canada to spend several weeks. While there, she learned about a whole new way of life, visiting grain, barley, and wheat fields to view the processing of cutting the ripe harvest and separating the chaff from the kernels. She brought home dried samples of different varieties of crops harvested, and takes pride in showing them and explaining their individual use to friends and family. She thus brought home many memories which afforded her some new knowledge heretofore inaccessible to her.

One time in her life that was particularly difficult was during the process of becoming an American citizen. She had to go to Montreal "all by myself," taking the early train and returning at midnight. Being a shy person and leaving a large family (in the hands of the older girls) for a day made this a fearful journey for her. In addition, she didn't speak much English at the time but "did the best I could." As it turned out, she had to make the trip twice because she didn't have the right papers the first time. Mrs. Petit describes the experience as a challenging one:

> I felt I was the boss. The first time I was nervous, but got some confidence from it. After the experience I felt good - relaxed. I knew I had to do it, so I did.

In responding to what she has learned from problems or conflicts in her life, Mrs. Petit remarked:

> The more bad things happen, the more people learn. People who are always thinking on the bad side of something - it will happen bad. If you think about the good side and that it will be good enough, then it is... If you pray, you can think more clearly and you go by what you've got. You find a way to get through a problem. You trust that your decision will be right after you pray about it - you trust it will be okay.

Mrs. Petit's first response to describing herself was: "I am independent. I enjoy company. But besides living with others, I like to live alone. I like to do what I want. I'm stubborn, maybe." As a result of her recent widowhood, Mrs. Petit claims she has a new awareness of herself - that she can live alone and enjoy it. She is quick to add, however, that she also enjoys people and their company. "I like half and half - company and living by myself."

Describing herself to herself was a difficult task for Mrs. Petit. "I like to do all kinds of stuff, but I don't know how to describe myself." After some encouragement she offered the following remarks:

> I like early morning and early bed. I feel I like to pray every day - twice a day, maybe more if I have time. I like everything I can do. I'm not sure what my weaknesses are. I try everything so I don't know what my weaknesses are. I think I can manage my money pretty good. I'm happy and I trust everybody. My father was that way - my husband said it wasn't good, but I do. I guess I think positively.

The terminal illness of her husband dominated Mrs. Petit's life during the past year. While she appears to be a woman who has been an active self-motivated learner, the only learning effort she recalled during the past twelve months was caring for her sick husband. She was motivated to do this "because I was the only one." A doctor and a nurse taught her a certain regimen for measuring the dosage of medicine and when to administer the pills throughout the day. When her husband had to have an operation, she learned how to increase the dosage as a preparatory step. She followed the "doctor's orders" consulting with him "once or twice" during this effort.

Reflecting on what has shaped the way she learns. Mrs. Petit claimed that "half is your background and the other half is myself." Her farming background had a significant impact on her, as she recalls. "Everybody on the farm had to work - had to do their job. That's what I learned."

A great deal of Mrs. Petit's past learning projects revolved around sewing. She started sewing by watching her mother when she was quite young. Her first sewing projects were doll clothes which she made without any patterns. Later, when her first daughter was a few weeks old, she sewed a dress for her by just looking at her and guessing. The dress was too small and had to be modified, but this effort launched Mrs. Petit on a twenty year "career" of making all her children's clothes. During this time, there was never much money to spend, so Mrs. Petit learned some inventive sewing tricks. "I used a catalog for ideas and had one pattern that I changed for different styles. When you don't have what you need, you have to get along with what you've got."

This self-sufficiency and independent style of learning and living was also evidenced in Mrs. Petit's reflections on how her personality affects the way she thinks and works. "I like to work by myself even though I wouldn't mind somebody being around. I just don't like pressure." Furthermore, she's aware that she does most of her thinking when she's at the sewing machine, sitting on a bench. "I'm thinking about the past and the future - what I'm going to do."

Mrs. Petit is aware that the nature of her thinking shifts with different times of the day. "In the morning I'm thinking of what I will do for the day. In the afternoon I'm more relaxed. At night, I shut off my thinking cap."

Her responses to thoughts also have a time orientation. "If the thought is something for later (future), I put it back (in my mind). If I'm anxious for it, it comes back to me."

Mrs. Petit tends to not focus her thinking on rational problem solving. "My mind is more loose. I don't think that hard." However, she is aware that answers to problems often come in other ways that are more spontaneous. One time when she was looking for a lost document (birth certificate), she almost gave up after turning the house upside down. At that point, she remembered her father (then deceased) who had always been organized. She addressed him saying, "Okay Dad, help me find this." She immediately looked in a dresser drawer and saw the document at the bottom. "It surprised me. I didn't think it was there since I had looked before. I felt he (father) was right there with me."

Mrs. Petit called this kind of thinking "Passage" (pronouncing it in French) because "something comes through a passage and it passes through the head and keeps going." Not only is this her "type of learning," but she claims, "I was that way all my life."

To Mrs. Petit, there is a pronounced difference between the way men and women think. "Men think of big things and projects. They don't think in detail. Men are slower to act. They have to think it through, but women are more spontaneous, emotional."

Future interests and plans revolve around two aspects of Mrs. Petit's life - her children and grandchildren and her newfound love of travel. She sees herself traveling overseas for the first time, going on "pilgrimages" to Italy, Jerusalem, France, visiting many holy shrines. She'd like to travel to Florida and Minnesota to visit two of her daughters and their families.

On these trips she would not only visit, but get involved in several projects. She'd like to teach interested grandchildren to sew and make bread. Also, she'd like to "help the kids - when they need me." With the increasing number of grandchildren, she sees herself doing more knitting and crocheting, "even for my grandsons."

As far as learning new things, Mrs. Petit feels she is presently learning how to travel by herself. The more she travels, the easier it becomes. Learning to relax on plane flights has been a recent effort. "Prayer helps."

She doesn't feel her learning is related to any future goal and doesn't foresee any projects that would involve additional information or skills. "They'll be continuations of projects I've done."

She is not the kind of person who would like to learn in a group, but she does utilize T.V. programs for information, especially on sewing, since "you can see it."

Summing up her style of learning, Mrs. Petit stated, "I like to be by myself when I learn something. There's nobody to go to so I keep trying and trying by myself." When asked if she could benefit from more support or guidance, she replied, "No, I guess not. Just grow into it."

Reflecting on her life she said, "I am happy the way it was and the way I am now; it will be the same. I haven't had bad luck, so I'm very happy with my life."

Case Study

Mr. Rock

Mr. Rock is a native Vermonter born and raised in a small rural community located in the Northeast section of Vermont. He is 52 years old, has completed 12 years of formal education, and lives alone in a modest home modernized with the help of friends some years back. He is an early retiree from the U.S. Postal Service where he worked for 22 years as a postal clerk. His early retirement was triggered by a cardiovascular accident suffered several years ago. While Mr. Rock can no longer exert himself as he once did, he continues to remain active coping with this disability by engaging in many personal and civic activities. His pension income, though modest, allows for a comfortable and relaxed lifestyle.

As a young man, Mr. Rock volunteered for the Navy during World War II before completing high school. Apparently, strong feelings of patriotism summoned him to serve his country as he recalled, "I felt an obligation to my home, my state and my country. I was proud to serve them all."

Following completion of the war, Mr. Rock returned to his boyhood home to complete his high school education. He described his early years as joyful and carefree. "I wasn't much of a student," he recalled, "although I graduated in the upper third of my class. I guess you could say I loved life more than school and I tried to extract the most I could out of it!" During this period of time, he studied radio and electronics, a vocation he enjoyed much as his father had. In fact, he spoke often about how his father's interest in electronics fueled hiw own. He called this time in his life "Getting an Education."

After completing high school, Mr. Rock worked for several years servicing radios and other electronic devices. He labored at great length trying to do a good job, but found the work to be financially unsatisfactory. Therefore, he moved to the Butterfield Division of the Union Twist Drill Company, where he worked approximately four years as a milling machine operator. However, Mr. Rock found the daily commute of 20 miles to and from work a drain on his income, and when the opportunity arose for postal clerk at the local post office, he applied and was granted the job. The postal job was initially part-time and allowed him more time to devote to his growing social obligations and return to his avocational interest: servicing radios and electronics. Calling this period in his life "Work and Community Service," he continued to do this work until his forced retirement at the age of 49 due to a cardiovascular accident which in his words "nearly put me six feet under." During these past years he talked about a "Personal/Social Family Time" which ended after a divorce. Another period of five years he called "Community Activities - Very Feverish" as he became very active in community groups like the Masons.

Mr. Rock's most recent years, however, have been difficult at best. With his marriage of three years ending in a divorce and his present poor health, he characterized the last few years as "sort of blah." This recent period he names "Health Concerns." Despite these problems, Mr. Rock stays busy with the local Masons, and invents energy-saving devices for his home.

Elaborating on a significant crisis or conflict in his life, Mr. Rock described his cardiovascular accident as "the most dramatic thing that's ever happened to me." He recounted how the accident occurred in the following words:

> I'd been to work and I'd come home and was very tired and instead of getting my supper as I usually did, I mixed a rye and water and the T.V. was on. It was turned on and I was sort of relaxing you might say, I don't think it was anything particular -- as I remember I was watching Ironsides - and it just happened. I thought I had the radish that time! I sort of lost consciousness slowly - I don't know how long I was passed out and I was slumped down on the divan when I came to. I crawled across the floor approximately twenty minutes later and called the doctor for help.

Mr. Rock vividly described his ordeal that lasted over the next year-and-one-half. The numerous hospital visits, doctor calls and the uncertainty of not knowing if he would ever regain his health made the time difficult at best. He practiced self denial as his way of coping. "I just wouldn't let myself admit it and I'd say it was a good two years before I began to come to grips with the fact that if that is what it is - you know - the condition is there - there's nothing you can do - there's no changing it." Reflecting over what he had learned from his protracted illness, Mr. Rock talked about how his life has changed.

> Now it's a completely different lifestyle - your way of living, your contract with society is totally changed. You don't socialize, in the first place you don't go out to eat because you're on a diet. You don't go out dancing because the smoking makes you sick. It changes your life completely. I'm also more in touch with myself, my feelings and abilities.

In describing himself, Mr. Rock painted a picture of an average person, fairly simple in demeanor and curious by nature. He enjoys people and likes to see them have a good time, but doesn't like situations where people are putting on airs. Neither grandeur nor money impresses him. He sees long ways to get "around a hassle." On the negative side, he sees himself becoming more opinionated and disgruntled. "I think that faction of me is getting worse as years go by." Overall, he views himself as having the best attributes of both his parents - being kind and giving to others.

While Mr. Rock may describe himself as a simple man, his learning efforts suggest a sophisticated thinker, one capable of working with abstract ideas and then concretizing them in the form of new inventions or plans. A good illustration of this ability is an energy savings modification he made to his wood stove. The original motivation to design a way of improving the heating efficiency of his Franklin stove was due to economic conditions. The price of oil had risen substantially to a point where Mr. Rock felt his lifestyle to be threatened. He began his project by assembling existing information of heat saving devices. He consulted local friends and heating specialists for their ideas. He read numerous books and magazine articles and through these sources, came upon the idea of utilizing his Franklin stove to heat the water needed for his baseboard heating units. Mr. Rock started by taking measurements of his Franklin stove in order to decide what size water coil he needed. He then drew various scale sketches in order to get the maximum amount of pipe in the available space. He continued to revise his drawings while searching for required materials to complete the job. He consulted the Sears Roebuck catalog, local hardware and plumbing stores and area salvage yards for supplies. Once the necessary materials were collected, he began to assemble his energy-saving unit. Because of his health problems, Mr. Rock had to proceed slowly, but after six weeks of steady work, completed the project. He then inserted the device in his Franklin stove and was ecstatic to find it worked. As he recalled, "My heat saver worked so well that it saved me at least $300.00, maybe even more, which is far more than the entire project cost. In one season, I've already had my capital outlay paid back."

Reflecting on who or what shaped his learning overall, Mr. Rock talked glowingly of his parents and the way he was brought up. He talked at great length about his insatiable appetite to learn new things and how he needs to know why something works the way it does.

> I'm not one who is satisfied with simply turning something on and off. I need to know why - what's inside. I'm not sure

> where this comes from, but it's a natural part of me. I'm interested in the world around me and how it works. I've often thought that this is the root of my motivation for why I do the things I do.

Looking broadly at the kind of learner Mr. Rock appears to be, one could represent him as a visual thinker who approaches problems in a logical step-by-step way. As he described, "I usually begin with an image in my mind, and then begin to let it take shape through the many books and articles I read and study. As I continue to look for answers, the image becomes real, whether on paper or in my head." He is also aware that he tends to do a lot of thinking subconsciously. He likened his thought process to that of a computer.

> Often, I find that I have learned something in the interim that I didn't even realize I was learning. It's a subconscious type of thing. But this may go with your mind working but I suppose it's like a computer - today's computer. You know, they keep putting information into them and you press the right button sometime in the future and the things come back the way - well, it's an accumulation of what they put in.

Without responding to any particular questions, Mr. Rock commented on his being "slightly psychic." He talked of visualizations appearing in his mind and images of persons or objects which portend the future. However, he tries to shut these experiences out of his mind, since he's concerned about how they might be used. Elaborating on this denial, he said, "I build a wall constantly around anything psychic because I have all I can do to mind my own business...I think it could dominate your life, you know, if you let it have its way and so I keep pushing it away."

As to which form of thinking Mr. Rock preferred, he chose the rational, step-by-step approach. He described himself as a creature of systematic analysis. "I like the rational way of thinking more, it saves you alot of steps, resulting in fewer mistakes."

Looking into the future, Mr. Rock saw himself traveling leisurely around the United States in a recreational vehicle. This is something he has long wanted to do. His first stop would be NiagaraFalls because of his interest in natural phenomena. From there, he talked of traveling to Detroit to see the cradle of industry in action. Of particular interest would be the electronics industry since this is an area of acute interest to him. From Detroit, Mr. Rock would explore the Midwest, paying particular attention to the people, their customs and environment. Montana or Idaho would be his next stop where he would investigate the various mining operations. Mr. Rock talked at length about this stop, saying, "I'd be looking for the mines, particularly those that produce metals, since this is in line with my electronics interest. I'd be searching for where the beginnings occur." It is curious to note that he did not mention any health problems connected to all this travel.

Mr. Rock's interest in reducing objects or things to their lowest common denominator, seems consistent with the kind of person he is. He talked of being a simple man blessed with an insatiable appetite for truth and knowledge. Although his health often impedes his learning process - spending excessive amounts of time on one project leads to headaches - Mr. Rock described his daily life as one filled with learning new things or solving problems. "My recreation," he said, "is solving problems and doing things. Sometimes it takes me longer to finish these days, but sooner or later, I'll get the project done."

Things that matter to him most are his friends, family and community. His life is dominated by the pain of his illness. Yet as related toward the end of the interview,

> I can't let a little pain stand in the way of my growing. Life is learning and learning is life. They go hand-in-hand. Don't get me wrong - I have much to learn. But I truthfully can't say that a day has gone by without my learning something new or different.

This connection of learning to living is also evident in Mr. Rock's evaluation of the interview experience.

> I'm quite surprised with the things we have talked about. Quite frankly, I didn't think I had much to offer to a study like this. I'm surprised, I guess, it helped me see a side of me that I hadn's seen before. The one satisfaction I would get is seeing others benefit from the study.

CASE STUDY

Carrie Simpson

Carrie Simpson, 75 years old, is a former teacher who moved to Vermont from New York City 15 years ago when her husband retired from the Telephone Company. Two years after this move to a small town near the Canadian border, her husband died and Carrie (who wants to be called by her first name) decided to stay in the rural community they'd chosen.

Carrie began her milestone events description by relating her experience in kindergarten. She entered kindergarten at four years of age and loved the experience and her teacher so much that she refused to go into first grade. Because Carrie was so young, the principal allowed her to remain in kindergarten for a second year and from then on, she knew she wanted to be a teacher. "I think it was because I liked my teacher -- first of all -- and I liked learning." She claimed that she never "swerved" from that decision, although she had "temptations" to become a dancer and a designer. In high school she skipped a couple of grades and quit school once for a few months in protest against a Latin teacher, who, on the first day of class, told Carrie she would not pass Latin because she was whispering to a friend. Looking back, she described herself as very strongwilled and independent. "I guess you could call me one of those early drop-outs." Returning to school after working in a store for a semester, she graduated and went on to normal school for two years. Her father didn't think it was necessary for girls to go beyond high school, "because they're going to get married anyway," but her mother encouraged her to continue with her education.

Upon completion of normal school, she taught three years in an inner city school in Philadelphia where she tried innovative methods for teaching racially mixed and disadvantaged children. She created math games, utilized the arts extensively and took them on many field trips, often on her own time. This period of her life she names "Making Friendships." During this time she married her first husband and when he took a position in New York City, she enrolled at Columbia University to finish her B.S. degree in primary education. This phase in her life she named "Awakening in Educational Life." Her professors included Margaret Mead and Edward Thorndike. She discovered that there was a name and a philosophy attached to the kind of teaching she was doing in Philadelphia - The Progressive Movement confirmed her natural teaching inclinations.

While at Columbia, she was offered a teaching job in a private girls' school and for the next few years continued part-time at Columbia until she finished her Master's Degree. During this time she also faced a personal crisis in her marriage which culminated in a divorce. When the depression hit, she lost her job but found another one at a private Boys' School. She became dissatisfied with the stiff formality in that school and left this job to teach primary grades in a private school in Brooklyn. While there, she administered IQ tests to all children in primary grades who were entering the school. She names this time "Professional Growth: Becoming More Secure."

Ten years after her divorce, she remarried and soon after, Pearl Harbor was struck and her husband was drafted. A year later when he was stationed in Washington, D.C., she left her teaching job to join him. She named this period of time "Mixture: Troubled Times and New Friendships Among Army People." The Signal Corps, where her husband was an officer, was composed mainly of Telephone Company men and it was like "one big fraternity". Living in the midst of the war's communications core and four-star generals was a very exciting experience, according to Carrie.

At the end of the war, they moved back to New York City where life again changed for her. Instead of teaching, she lived the suburban life of "Everyday Events and Settling in - Neighborly" - as she calls this 10-year span in her life. Summers were spent at a lake on the Canadian border of Vermont and Canada where she and her husband later built a cottage.

A few years before her husband retired, they bought the house in Vermont where Carrie presently lives. They began making many travel plans. However, two years into retirement, her husband became ill and died and Carrie was left alone in a large house in a remote Vermont village, feeling quite unprepared for widowhood. She describes this time in her life as "Adjustment Time: Settling Down and Looking Ahead."

Since her husband's death, she has become very involved in church work and arts and crafts, much of it sold at church bazaars. She also travelled abroad extensively with friends. However, because she doesn't drive a car, she feels quite stranded and has to rely on friends to take her places. She continues to enjoy the summer cabin and her friends from many summers spent in that summer community. From time to time, relatives visit her but some health problems constrain the amount of entertaining she is able to do. This period of time she names "Adjustment to Widowhood."

Carrie Simpson recalled 38 specific Milestone events in her life since high school and clustered these into seven periods of varying time spans from two years to fifteen years.

When asked to recall a particularly difficult time in her life, Carrie began by saying she wouldn't divulge her deepest secrets. She selected a time during her early teaching days when she had to defend a teaching practice before a group of parents. Using examples of children's work, she demonstrated the positive effects of her method which was convincing evidence for the parents.

Asked if crisis times are significant periods in one's life, she responded with "It depends on what the crisis is." She then described in more detail the most difficult time in her life which earlier she was reluctant to talk about - the divorce from her first husband. Soon after they were married, she discovered his infidelity and was completely crushed and extremely hurt. She reflected that if she had been "a little more rational instead of emotional, I might have figured this will pass." They both thought the world of each other but "it was too much of a temptation - he wanted to have his fling." For two years after the divorce she was depressed and nothing helped except time. "It left a scar for months and months and months. It just had to wear out." This experience taught her how hard it is to feel rejected. Carrie felt that this loss was "worse than death". For her, it was a bigger crisis than her second husband's death since her first husband had a choice to make "whereas my second husband didn't have a choice when he left me."

Carrie had no difficulty describing herself to herself. Her first thought was that she is a hard worker and has worked for everything she has. While she is not ashamed of herself, she feels that she tends to procrastinate on things that are difficult to cope with. For instance, she has not been able to bring herself to construct a will. Part of the difficulty, she claims, is not having any children and wondering how to divide up her property among other relatives.

Her many interests make her feel that the days end too fast and she can't understand people complaining about how slow their days go. "So I don't get bored, even when I'm by myself all day." As a basically happy person, she tries to bring some joy to others' lives, often visiting some invalid neighbors. Although she knows she's been hurt terribly several times in her life, she gets over it by "not clinging to those feelings."

Carrie likes people, young and old. Many times little children want to come to her home and play games with her. Animals are also special to her. "I think anyone who dislikes animals or mistreats animals is not a good person."

One time her pastor told her she was a perfectionist and she said, "Yes, unfortunately, because you never reach perfection, and you're always troubled and you're never quite satisfied with your accomplishments." While she's ready to try almost any new arts or crafts project, she is not ready to try driving a car. "I think as you get older, you get a bit more timid about things."

Carrie's learning projects tend to have roots in her past. When she took up a particular Bible Study project which the pastor of her church initiated, she was responding to having always been "a church goer". However, her expectations were to "learn more about scriptures," while most of the people saw it as a "social group". Nevertheless, she continued to take it seriously, beginning by reading some books about the Bible and looking up anything she didn't understand. In addition, her sister sent her audio tapes on the Book of Acts which the group was studying and she took notes and shared this information with the class, sometimes leading it when the pastor was away. When the group didn't satisfy her interests, she would "come home and dig in deeper," studying almost every evening, "although I'm not one to follow a schedule." She realized that she could learn more on her own at home, but stayed with the group out of loyalty to the pastor. Knowing that she'll never feel this learning is completed, she has decided to study other Biblical books on her own and enjoys sharing some of her knowledge with a neighbor.

Overall when Carrie takes on a learning effort, she tends to "go to the source - a book or to someone in authority." Even in a crafts project, she reads directions before beginning.

She feels that one's growth is gradual over many years. "You've learned alot before you're ready to do a certain job." Even though her parents didn't finish grade school, she feels they influenced her learning style a great deal. Her father would open up a dictionary each night at the supper table: "We'd gather around and he'd just turn it over, look at a word and say 'what's that mean?' and explain it to us and that word would lead to another word."

Ironing and washing dishes are times when Carrie tends to be thinking. "You can use your hands and your mind doesn't stop." Often she'll wake up at night with thoughts and if they're not pleasant she will try to get it off her mind by thinking of something pleasant. If Carrie gets an idea when she's tired, she'll put it aside and tackle it when her "mind is fresh." Usually, however, she'll "stick to it until I get it." She relates this tenacity to her curiosity and love of learning.

Carrie is aware of times when ideas or answers come to her unexpectedly. A frequent example for her is when she is trying to remember a name and it pops up later. Also, when she was teaching she had many dreams which gave her "pictures" of new math games sometimes showing people interacting with each other. Often this "spontaneous" mode of thinking results in helpful brainstorms, but she doesn't feel this makes her different from others. "I don't know where ideas come from...I'm just pleased that my ideas get results." In her art projects she gets ideas from leaves, flowers, or even a piece of material. She then would "modify it because I don't like to copy." Carrie feels she favors rational thinking over "spontaneous" thinking ("not previously planned") because with rational thought, "you can work at it."

Reflecting on the way men and women think, she doesn't feel that men are more rational than women since they "can both think long term." However, she feels most men don't have patience for details. Whereas, "men like to make decisions, women are much better at putting things together."

Looking into her future, Carrie hopes to "continue in the way I've been - maintain my health, eating properly and getting sufficient rest." She'd also like "to finish up a lot of things, and go through things I've saved; sort out and organize." Her projected tasks include an inventory of possessions, (especially antiques and momentos) a scrapbook of travel pictures, finishing hand work and making out a will. In a social context she hopes to keep in touch with friends, work in the community and the church, and visit shut-ins ("maybe someday I'll be a shut-in"). She contributes antiques to the local historic museum and gets involved in presenting special programs there. If asked, she would also lead a Bible Study group. "I study anyway, whether I'm the leader or not, but I would go deeper to answer their questions."

Accomplishing these tasks would not only be satisfying to Carrie but would give her "more peace of mind". She feels that she has done many things in her lifetime. "I tried almost everything when I was younger." Even though she'd still like to travel, it's harder now without her husband and she doesn't want to impose on friends to get around. If given the opportunity she'd love to join a square dancing group but she hasn't been invited yet.

These kinds of activities bring to mind her full life in New York City, when she danced every Saturday night, attended Carnegie public speaking courses, ice skated at the Ice Palace and attended operas and special events. It was at the Museum of Natural History that she took a course on anthropology with Margaret Mead. "I could never understand why people didn't take advantage of the learning that was available there." After living most of her life in a bustling urban context, Carrie now has mixed reactions to her rural Vermont life. She would like to be more intellectually stimulated but understands that many of her friends and neighbors have other motivations, perhaps because they haven't had the rich exposure to many fields of knowledge as she has had. In response to what formal educational programs might do for rural adults, she recommended a "visiting educators" model based on the visiting nurses program. "Those folks would come to a small town and meet where people could get to - for short periods of time....If formal education did this, a big field would be opened up."

Personal Reflections on Sessions with Mrs. Field

Pat Fontaine

I was awake and ready to leave long before the early alarm, stomach tight, heart beating a little faster than usual. I was eager to be gone, yet hesitant, doubtful that everything was in creative order. At the last minute I bagged the briefcase and bundled the materials into a small carton. (Farm folk, not executives, I thought), finally wrestling it out into the wet, cool morning. I had supplies enough for a week's traveling, I laughed and indeed, much of me felt I was discovering, and entering, a new land.

I was to meet Mrs. Field, this spring day, my second participant in the Adult Learning Project. I was excited and not a little anxious as I moved through outlying towns of Burlington that grew sparser as the road veered north. Beginning journeys always hold this mix of magic and tension for me: eager for the exploration; fearful of the unknown. I was wondering how I would be received, perceived by the Fields. Could we accomplish the tasks and still have room for trust to develop? Would the family accept me? Would Mrs. Field still be interested? Would I get lost?

My fretting diminished as I drove and the metaphor of exploration replaced it - I was on my way. As I grew more distant from the city, the richness of the land unfolded and impressed me as usual with its vastness, grace of contour and a certain harsh wildness that hinted of survival.

Thinking back, I wonder at the excitement that preceded each and every departure, reduced only slightly by a familiarity with the routine of preparation. It was caused in part by a sense of envoy, I think, combined with the beauty of the land and most importantly, the opportunity to observe Mrs. Field's life - and explore, with her, the great territories of learning.

It was Mrs. Field, perhaps, who struggled with and challenged much of her learning, both academic and life-oriented. From her, I learned to be aware of my own values and attitudes that I thought were so naively unapparent in our meetings. My experience with Mrs. Field compelled me to explore the process, as well as the content, of our sessions together - which I will briefly impart here for the reader from my role as observer and interviewer. I'll pay attention to three parts: Beginning, Interactions and Endings.

Beginning that morning, I drove through the small town and right past the Field's sprawling, two-story house that hugged the road with a sun-deck in front. The small yard extended back a short ways, met by a hill rising abruptly and two neighbors close-ranked on either side. I arrived at 9 A.M. an agreed-upon time but one that caught the family in the middle of chores and breakfast. Mrs. Field, groggy from a night shift at the Nursing Home across the street, asked if I could come back at 1 p.m. - a time at which we continued to meet thereafter.

On my return, I was met at the car by the youngest daughter, who asked if I was "that woman." (I was, and remained "that lady" until the third or fourth session, when I began to be greeted as Pat). She cheerfully conducted the way to a small, shed-like barn and proudly showed me the newborn calves, goats, and puppies. She introduced me to Mr. Field and an older son as they each sat, forehead to cow, for the afternoon milking.

This weaving of family life with farm chores characterized many of my visits - in which one of the family would show me what was "new" - whether peeping chicks or later, a time-saving gizmo Mr. Field had created for his violin-peg finishing machine (a cottage industry that added sorely needed income).

Mrs. Field would soon appear and invite me in for coffee, leading the way upstairs out of the busy kitchen to a quiet comfortable living room, where we often heard the strains of country music from the nearby shed.

After I set up the tape recorder (which Mrs. Field always regarded with a mischievous glint), we were seldom disturbed for the 1/2 - 2 hours that we met. I often heard Mr. Field intercepting phone calls or shushing the kids when he would take breaks from chores or peg-polishing. The Field's had an active household, providing placement for transitional state hospital patients and an occasional "older gentleman" from the Nursing Home, in addition to 6 children that ranged from 9 - 16.

However busy, Mr. Field did not remain a stranger, and once "consulted" with us at his wife's request to help job her memory about an upholstering project. It eventually entailed a search for the photo-album and proud display and discussion of completed projects. As the sessions continued, he would often leave his bench when we descended into the kitchen, occasionally offering bits of information about his wife's learning efforts or questioning me, hesitantly at first, about the project. He was most curious, as was his wife, about what the questions I asked and thing we discussed were going to do - practical, common-sense concerns that encouraged me to formulate objectives and definitions of the project and its future.

In fact, as we progressed, Mrs. Field began asking some difficult questions about her own future, including her marriage and lack of education. Although she felt her husband was a good provider and guide, she confessed at times that she felt he was "always right," something that continued to gnaw at her self-avowed poor sense of confidence and achievement. She often spoke of a longing for "roots" and a desire to be "free," and eventually admitted she was searching for her real mother who had left home when she was 13.

The hard facts of life and death and the realities of small community living continued to interact with our sessions, including the speculation and curiosity of the town about my visits (overheard at the country store across the street). Another harsh reality was the death of Mrs. Field's grandmother halfway through our meetings - a woman described as "cantankerous" but whom Mrs. Field had nursed continuously at the Nursing Home for the past 10 years.

Mrs. Field responded candidly and willingly to all of our explorations, frequently, as was her custom, questioning the use or validity of many of them (and education in general). She often laughed at herself, yet consistently gave serious thought and response to each issue. Sometimes I got the sense that she would have liked to talk with me for many hours beyond our brief visit. At times, it was difficult to wind things up and be on my way without a side-trip to the barn or taste of a new batch of cottage cheese.

As we neared the end of our time together, Mrs. Field grew increasingly verbal about her thoughts and frustrations, especially concerning her mother-search and one particular ongoing family issue.

On the day of our last session, the November rath put a chill in the air, soon dispelled by the Field's warm kitchen. The day was further distinguished not only by the recently bagged deer that hung off the back porch, but Mrs. Field's excited announcement of positive contact with her mother. She was jubilant, proud of her involvement with the project, and pleased with her own progress. However, beneath the surface of plenty there was to be detected a sad quality about Mrs. Field, which I took to mean as sadness for the ending of our time together - a feeling I echoed as well.

Ironically, I received word several months later that Mrs. Field had run away and left her family - possibly to join her mother, possibly to pursue her ideas of "freedom" and "roots." I was as if Mrs. Field decided to take her learning literally:

> It's harder to learn now...I've felt like an outsider...What I've got yet to do, is find myself.

Reflections on Mr. Rock

The seasonal change from winter to spring was well underway as I pointed the car north for my initial visit with Mr. Rock. It was mid-April and already the days were growing warmer. The buds on the trees were swelling and early wild flowers dotted the landscape. Sounds of birds in their trek north punctuated the serenity of nature as she shed her winter's skin. As I traveled those first hundred miles, my mind wandered, asking what lay before me. Would I be received warmly? What kind of person would Mr. Rock be? How would he react to a person affiliated with the University? Would I be seen as a villain or a friend? Questions such as these occupied my mind as I approached the promised land known as the Northeast Kingdom. My questions and concerns were soon put to rest as I met and talked with Mr. Rock.

I arrived promptly for my initial visit at 10 A.M. It was a Friday, brisk and overcast. As I unfolded myself from the small foreign car, I scanned the yard, looking for signs of what kind of person Mr. Rock would be. There were few telltale signs. I cautiously approached the back door, taking note of the old but newly clapboarded house. It was on the small side - more a cottage than a house - and had clear Victorian lines. The house reminded me of the "Gingerbread" house in Hanzel and Gretel. For a moment, my mind wandered thinking - what a neat little place it would be in the Land of Oz. I rang the doorbell, and after a few seconds, was greeted by a short but heavy-set man. He identified himself as Mr. Rock and asked if I was the person from the University. I said I was and gave my name. We exchanged pleasantries, and after several minutes of sizing each other up, I was invited in. We passed through a cluttered entryway and into the kitchen. I stopped to scan the room, and noticed telltale signs of a bachelor (at least someone who lived alone). There were dishes and folded clothes about and the kitchen table was occupied by a television in disrepair. "Obviously," I thought to myself, "few women would put up with such ordered clutter." We then passed into the living room where I was offered a comfortable chair. As I sat down, I noticed the room filled with numerous tools and gadgets. In one corner lay several radios, in another - a pile of books, magazines and monographs. The room was arranged comfortably with the television on and police scanner blinking madly. I later learned that these items served a companion role, helping to pass the time away. As Mr. Rock related, "You know, it may sound crazy but that damn thing (T.V.) is a blessing in disguise. I'm pretty busy with my many projects, and it's good to have it on in the background. It's like having company when you really don't!"

Once comfortably settled, I began to describe for Mr. Rock the nature and purpose of the study. I gave a brief history of the project and stated why he had been selected to participate in the case study phase. He listened intently, and interrupted only to ask clarifying questions. After about ten minutes of conversation, it was clear that Mr. Rock was a ready and willing participant. I noticed a distinct change in his eye and body movement: a reassuring glance, softening of the eyes and relaxed torso were the telltale signs. We chatted more intently about the world around us and his personal life. Already, a trusting bond was forming. I remember thinking to myself what a neat experience this interview was going to be. Mr. Rock, almost in total agreement, later admitted, "I'm really going to enjoy this effort (too)."

The initial interview session was a good one and set the stage for a pattern that would be repeated over the next six months. The pattern resembled the following: I would usually visit Mr. Rock mid-morning on Fridays. All would occur in his living room with most taking two-and-one-half hours to complete. The television and competing radios would be turned down but not off. I would be offered coffee and sweet roll, and reminded that if I needed anything, I was to simply ask. Following each interview, plans for my next visit would be made with times and dates agreed upon mutually. Once the interviewing obligations had been completed, conversations turned to lighter, more peripheral matters such as sports, current events or home repair. Sometimes, these conversations lasted an additional half-hour and would reveal another side of Mr. Rock's life: a side very similar to my own.

The process of data collection was straightforward and undramatic. A cassette tape recorder was used along with space provided on the respective interview protocols. As Mr. Rock responded to the various questions, I recorded data in abbreviated form, letting the tape recorder do the bulk of the work. This afforded me the opportunity to focus my attention on Mr. Rock and pick up any subtle nuances as they developed. At no point throughout our many conversations did the tape recorder seem to "get in the way." Nor did it cause Mr. Rock any discomfort, although a few times he would kiddingly remark, "Is that bloody thing still on?"

Mr. Rock appeared comfortable with the various interview questions. He patiently listened to each question and if one seemed confusing or unclear, would ask for further clarification. Once the meaning of each question was established, Mr. Rock would answer in clear, straightforward prose. At times, a degree of coldness crept into his remarks, especially when they dealt with matters of self and community. Most times, however, he responded in a humerous lighthearted way.

Personal Reflections on Sessions with Mr. Ambrose

Connie Leean

It started out as a promising, sunny day in March but as I had come to expect, became increasingly more cloudy and cold as I began the steady incline north of Eden, Vt. Intermittent snow flurries predicted earlier which had seemed so unlikely now became a reality. I silently hoped the forecasters were right about it this time and that these light and delicate flakes would remain in that state for the remainder of the day. I had experienced a driving blizzard along these isolated northern woods last fall and was not looking forward to a repeat performance.

My thoughts turned to the farmer I was soon to visit for a second time, having spent a delightful few hours with the Tough questions last fall. He had told me when I called recently that he would be free to talk after his morning chores and breakfast - about 10:00.

An hour and a half later, driving a mile out of the small town (or shall I say whistle stop?), I rounded the bend which enclosed a protective cemetery, and almost drove by the small farm again. I remembered I had done that the first time, also. The small yellow farmhouse and shed-like barn stand conspicuously close to the highway. A few sheds nearby, a narrow patch of lawn around the house and rolling fields reaching back to a dense woods present a very modest sense of a farm. In fact, I remembered thinking that it didn't look like too much of a farm.

I was greeted by a German shepherd, straining at his chain in the nearby shed, announcing in no uncertain terms that I was an interloper. Mrs. Ambrose came to the door and yelled at the dog, assuring me he was tied for which I was quite grateful. (I was later to hear why ferocious dogs are important with the growing phenomena of rustlers and other thieves who seem to be plaguing the small farmer, especially in more remote areas of Vermont.) Mrs. brose brought me into the kitchen and said Mr. Ambrose would join me at the kitchen table. He soon came out of the bathroom, freshly bathed and shaved, wearing clean but well-worn working clothes. In fact, his wife also looked freshly scrubbed and was wearing polyester slacks and printed top (which she donned every time I came to visit). This pattern of being greeted by the wife and sitting down to a conversation with the freshly bathed farmer was repeated for most of the sessions. Mrs. Ambrose usually excused herself by saying that she would to into town or do some errands and "leave us alone," although a couple times she came into the kitchen to wash dishes or do laundry, her husband reminding her to be more quiet a couple of times. Several times his dogs barking outside would interrupt his train of thought, also.

By the time I entered on the scene, the Ambrose's had been working for five to six hours, rising at 4:00 a.m. and doing chores and milking for several hours before cleaning and having a hearty breakfast at about 9:00 a.m. Throughout the six months of interviewing I was continuously amazed at how much time Mr. Ambrose would give to the project out of his very busy and active farming schedule. Most sessions were at least two hours and a few extended to almost three hours. In fact, I began to worry that his wife might become concerned since she seemed to be an active partner in their new farming venture. When she was in the room doing her chores, I could tell she was listening and this was confirmed when she chimed in a couple times, adding to her husband's responses. I took the cue, encouraging her to join in and she appeared to enjoy the chance to sit down and chat also.

There seemed to be a good balance between the two of them, the husband being more of a dreamer while his wife kept the family grounded and stable. At one point, however, Mr. Ambrose confided in me that her cautiousness kept him from trying farming many years before. On the other hand, he also felt that she deserved a better life than they had now. According to Mr. Ambrose, they were still struggling to make a go of their lives at a point when most people had much more to show for their efforts. They were renting the modest farm and the house was old and poorly insulated, presenting a huge heating bill each winter. As Mr. Ambrose said repeatedly, "The wife deserves a better house than this and as soon as we can get on top of this thing, she'll get it...God willing."

At the outset, Mr. Ambrose was amused by the tape recorder but didn't object to its use. Once in awhile he would remark, "Hey, has that thing been on through all this? I forgot you had it going." Then jokingly, "I'd better be careful what I say!"

Mr. Ambrose responded goodnaturedly to all the questions, asking me often to repeat them since he claimed he hadn't been thinking hard like this for some time. He frequently joked about life and himself, even in the context of a serious thought. His responses to questions were sometimes tangential to the point, perhaps because he interpreted those questions differently than they were intended. But he was always patient when asked the question a second time with accompanying clarifications.

Another tendency in his responses was to elaborate in great detail about the mechanics of a machinery problem he was solving. It was as if he needed to tell me exactly how he experienced such a process. These tangential stories indicated a great deal about Mr. Ambrose. Patterns of his problem solving style, his inventiveness, his humor and his humanness surfaced frequently in these unsolicited soliloquies.

Case Study Analysis/Findings

The process of analysis, like the design and data collection phases, was continuous and iterative. It began soon after all the case study sessions were completed and continued for several months throughout the follow-up visits and conference presentations. This process provided for continual refinement and cross-checking of the initial findings.

There were also several different levels and kinds of analysis. In order to examine the immense bulk of descriptive data, a thematic approach to content analysis was undertaken by the Co-Researchers. That is, responses to questions across respondents were examined for common themes, using a logical categorization of these recurring patterns (Smith and Meux , 1970). Each of the Co-Researchers did an independent analysis and then used these items as a basis for interjudge reliability. Only the themes that held up under this kind of scrutiny were maintained. Another check on these themes happened during the discussions by the Co-Interpretors at the two retreat sessions.

Another kind of analysis was performed on the cognitive profile data by Dr. Charles Letteri who used a descriptive statistical analysis on the seven dimensions of cognition.

A third kind of analysis was done by Dr. Jill Maddoc-Tarule who examined the transcripts to several questions in light of developmental theory. She basically used a coding system based on analysis schemes from Perry (1968) and Loevinger (1977).

In order to move toward synthesis of all of these separate analyses, an attempt was made to look for cluster themes and interactional themes. These, in turn were used to generate inferences which form the basis of theory generation and policy implications.

Descriptive Content Themes. The first level of analysis examined the content themes across all the respondents' interview responses. The major themes that seemed evident by several audiences and remained after continued scrutiny are presented in the following pages, listed under the time framework of PAST, PRESENT, FUTURE. Following these is a list of minor themes which were observed in only a few of the cases.

PAST (Milestone Exercise, Coping with Conflict)

1. About 1/3 perceived lack of education as a handicap (attitudenal, job, standard of living).
2. The women did not feel adequately prepared for marriage and family responsibilities. (Most worked at home or on farm before getting married)
3. Both men and women recognized that they learned from dealing with crisis and conflicts in their lives.
4. Many have cared for children and relatives in extended family situations.
5. Women appear to be asserting themselves after some years of "hard times," coping and adjusting. Pride in becoming independent was prevalent.
6. Learning since formal schooling has been rich, varied and enjoyable.
7. About half described more recent learning efforts in terms of self-realization, self-growth and self-discovery.
8. Women, more often than men, talked about close ties with their fathers.
9. Women described their period of establishing a family in negative terms ("bad times," "hard times").
10. Men and women selected a health or sickness event as a significant milestone.
11. There seems to be no pattern in the number of years associated with the time blocks or developmental phases.
12. Most alluded to a particular time in their lives when they "came to themselves" - a point of personal realization, decision-making and movement toward a positive goal.
13. Women, more than men, indicate marriage problems as significant in their lives.
14. Women tend to be seeking new experiences while the men seem to be interested in maintaining and improving their skills. ("Seekers vs. Focusers" -Penland, 1978)
15. Both men and women have experienced a variety of jobs.

16. People tended to see learning and living go hand in hand.

17. Most of the women indicated they were very active in religious and church affairs. (Men didn't bring up this topic)

18. Both men and women seemed hardworking and industrious and commented on the importance of doing things well and completely.

19. Both men and women claimed that their upbringing primarily shaped their personal approach to learning and working. Some indicated that their social values were also formed in their early childhood.

PRESENT (Learning Style, Modes of Thinking, Self-to-Self)

1. Both men and women see themselves as "learners" and expect to continue to learn throughout their lives.

2. Using visualization in planning their learning efforts was a common experience. That is, there seems to be work done in the mind before it is done with the hands.

3. Both men and women see themselves as capable of teaching others something they have learned.

4. Several talked about a structured course having a significant impact on them.

5. While most described themselves as analytical, logical thinkers, they readily recognized times when their thinking was non-rational - i.e., intuitive, psychic, spontaneous.

6. Most noted differences in the way men and women think, but there were no common patterns in their responses.

7. Both men and women expressed belief in the value of common sense thinking and problem solving.

8. Several noted that often solutions to problems come after a good night's sleep and also sometimes in the form of dreams.

9. Thinking appears to be connected with the times when people are doing chores and mundane, repetitive tasks.

10. Both men and women noted they liked people and want to help those in need.

11. Optimism was a common theme and often related to improving themselves and their lives.

12. Older Co-Investigators seem to be more "in touch" with themselves than their younger counterparts - i.e., describe self in more depth, variety, clarity.

13. Both men and women have an independent, self-reliant attitude toward life.

14. They tended to see themselves as not special or different from others even though they are proud of their accomplishments.

15. Pride (or ego?) seems to be expressed more loudly by men than by women.

16. There was a concern for and a dedication to their communities. Two expressed a desire to serve in an elected office.

FUTURE. (Future Projection, Summary questions)

1. Both men and women expressed a desire to travel, seeing new places and different people and ways of life.

2. Several (all women) expressed an interest in learning more about communication, developing better talking, listening and responding skills.

3. Several (all women) saw themselves continuing to make arts and crafts for pleasure and community bazaars. One thought she might open a small business for her products.

4. A few men talked about continuing to work at controlling their tempers.

5. Except for the desire to travel, the future didn't appear to be much different from the present for most people.

6. Several indicated they wanted to complete unfinished projects before they did other things like travel.

7. Several initially claimed they were contented and satisfied with the way their lives were at the present. However, upon further probing, they did talk about unfulfilled dreams or desires.

8. Several said they were looking forward to building new homes.

9. Several look forward to their grandchildren as a source of pride and pleasure. They also expressed a desire to teach them about practical things.

10. Both men and women want to help others with their problems and needs (i.e., work with handicapped children, the disadvantaged, the elderly, the sick and their grandchildren).

11. Many expressed a deep concern for the direction that youth are going today (i.e., youth seem more apathetic, lazy, less disciplined, and wanting too much too fast).

12. When asked to sort out all the learning they do into three major motivational categories, the mean scores were:

    1. Learning for Fun/Interest = 41%
    2. Learning for Practical Purposes = 39%
    3. Learning for a Future Goal = 19%

Minor Themes

1. Three men viewed themselves as "hellions," having had rebellious youths and a violent temper. These men talking of the importance of thinking before acting. They also both talked about women as more capable of rational thought than men. (Keller, Aube, Ambrose)

2. For several people learning was a necessary process: for health (French), for raising child (LaCroix), for surviving at new career (Ambrose, Paquette).

3. Two people who had lived outside the state in urban environments seemed more aware than the others of the differences in people and cultures and expressed how much they had learned from these people and experiences. (Moss and Ambrose)

4. For some people thinking and learning "just happens" without a conscious attempt to plan it. (Moss, Petit, Ambrose and Aube)

5. Two women noted that they preferred the non-rational approach to thinking. (Moss, Petit)

6. Some expressed opinions about Vermonters as people who have had a hard time asking questions and seeking help from someone else - perhaps because of their pride and Yankee individualism.

7. For a few, the rational way of thinking is better because it saves one from wasting time by making mistakes.

8. Personal health seems to stand in the way for some in expanding their interests.

9. Some husbands seem to be obstacles for their wives' further growth and development of interests and talents.

> Intelligence is not merely the capacity which enables us to profit by experience, it is the function of the personality which gives experience its past, present and future meaning. (Lindeman, 1926)

Broad Theme Analysis. Another level of analysis involved a further condensation of these *descriptive patterns* into a few *broader themes*. In order to accomplish this, the following questions were addressed to the data:

1. What are people saying about their learning in light of their PAST? That is, what influence does a person's past history have on the development of a learning style?

2. How do people think about and plan learning efforts on their own?

3. What can personal projections of self-fulfillment connect up with learning interests or needs?

Using these general questions, which roughly paralleled the study's initial Foreshadowing Questions, broader themes of analysis emerged. These themes follow with some brief interpretive suggestions when appropriate which are underlined to set them apart from the analytical statements. These interpretations will be discussed in more detail in a later section of this report.

A. PAST: Influence of significant events, times of conflict

1. When given the chance to reflect and to communicate about their significant life experiences, most felt they had learned and grown throughout the changes in their lives. It was also evident that they had dealt with crisis and problems in quite rational, reflective ways. However, most indicated they had not been aware of these changes and resultant learning. Suggests that an intervention of this kind is important for increasing awareness of oneself as a learner within life experiences.

2. Motivations for their present learning efforts often were linked to their past as interests which were stimulated back then were tucked away until a later time. Suggests a readiness for learning at a "teachable moment."

3. People enjoyed Milestone Event exercise as a way to tell their stories. Also became reference point for much of the later discussion. Suggests this may be an important methodological tool for grounding an indepth study and for establishing rapport between researcher and subject.

4. For many people, there are negative or troublesome aspects in their pasts which are still unresolved (anger, hurts, illness, deaths) but very foremost in people's minds. Suggests areas which are "ripe" for significant learning.

5. Many people felt that their approach to learning and problem solving (as well as their basic values) had been shaped in their early childhood, often by their parents' attitudes and actions. Suggests the importance of encouraging adult learners to reflect back on their childhood in order to understand their present actions.

B. PRESENT: Modes of learning and thinking and problem solving

1. Learning is seen as a part of everyday living as people

are continually challenged by their environments to solve problems as well as explore interests. Suggests that "undereducated" should be perceived as learners who already have skills.

2. Thinking is connected to times when people are alone, usually doing a mundane or repetitive chore or task. Suggests that self-directed learning involves work done in the mind before it is done with the hands.

3. The ways people talked about how they go about their self-directed learning varied, but most referred to visualizing the end state of the learning goal before they entered into the effort. Suggests further exploration of the process of visualization as a guide or motivating phenomena in self-directed learning.

4. Learning since leaving school has been varied, challenging and meaningful. People commented on how much more they have learned outside of the public school context. They enjoy self-directed learning because they can do it at their own pace and without anybody judging them. This is consistent with findings from other research on self-directed learning. Suggests self-directed learning should be taken seriously as an alternative form of learning.

5. The cognitive profiles of the group looked like a normal distribution of other populations tested. Suggests that the number of years of formal education is not necessarily correlated to one's cognitive abilities.

6. Both men and women expressed a belief in the value of common sense thinking and rational problem solving, providing many examples of how they do this. Suggests that self-directed learning is guided by innate abilities of the rational mind.

7. Most recognized times when they got answers to problems through non-rational means. Again, many experiences were related. Descriptive names given to this way of thinking were: "back-burner thinking," "dream thinking," "psychic," "spontaneous," "passage thinking." Suggests alternative states of consciousness may be helpful in one's self-directed learning efforts.

8. Developmentally, the group was dispersed in a bell-shaped curve using Loevinger dimensions of preconventional, conventional and postconventional. Factors which seemed to impede and enhance developmental movement were evident in many of their statements about themselves. These obstacles tended to be a limited sense of self and the

inability to resolve contradictions in one's life. Suggests more attention paid to how developmental theory can enrich the understanding of adult learning, especially through the study of growth enhancing and impeding factors.

9. Having access to resources and information doesn't appear to be a major problem in the learning processes of these rural learners. They seem to know where to go for what they need. However, when this was probed more, they did speak about some frustrations in getting full and accurate information. Suggests that information services for rural "long distance learners" may be helpful if they are responsive and relevant to specific needs and contexts of rural learners.

C. FUTURE: Projections of self-fulfillment

1. There was a concern for and a dedication to their communities - especially in helping youth who, to many, seem to be so directionless. Suggests areas for community education projects - i.e., foxfire, oral history, youth services projects - which link communities with their youth.

2. Both men and women expressed a desire to travel - not a leisure time motivation, but a curiosity to see new places and different people and ways of life. Suggests many things for educational offerings. Perhaps travel is also a metaphor for expansion of their lives and consciousness (suggested by several of our consultants).

3. Women are interested in learning more about communication skills (talking and listening and responding) and continuing to develop their artistic skills. Also some interested in becoming more independent in small business ventures. A pattern for women's learning efforts and learning projections seems to be that they are "seekers;" that is, they have multiple interests they want to explore, whereas men tend to be "focusers," or improving the skills and interests they already have (consistent with Penland's findings). Suggests different approaches to men and women in supporting their learning efforts.

4. When people first talked about themselves in the future, they didn't see life changing that much. Upon further probing, however, many dreams and unfulfilled desires surfaced, providing new data that had not been mentioned in the other 12 hours of conversation. Suggests that people need to be encouraged to talk about hopes and dreams when these relate to possible learning goals.

5. People see themselves continuing to learn as a natural part of living. "If you're not learning, you're dead!" Suggests that self-directed learning will continue regardless of any formal education interventions.

6. If formal or structured learning was offered, they wanted it to deal with information that was useful to them. Also they would like these offered in their own communities, perhaps in small groups, even in homes or other comfortable settings. They are not concerned with credit courses and don't want to be treated like some "dumb kids" who don't know anything. Suggests some clear preconditions for successful outreach efforts to the "educationally disadvantaged" or "underserved adult."

Issue Analysis. A further level of analysis occurred by noting several recurring issues throughout the case studies. These issues seemed to emerge from the data in more subtle ways than the other learning patterns and themes. That is, specific questions were not raised to stimulate discussion in these areas. Rather, these issues represent unsolicited responses of the Co-Investigators.

Values and beliefs held by most of the respondents constitutes one issue theme. The following are typical statements which convey a value stance.

1. Thinking good thoughts or doing good comes back to you.
2. Working hard with persistence keeps one going.
3. Knowledge is good common sense.
4. Knowing you have to do something, you do it.
5. One can learn a great deal from outdoors and from animals and birds.
6. It's important to experience life fully (before it's too late).
7. It's important to do things well and completely. Quality is more important than quantity.
8. Honesty is the best policy.
9. Life is learning and learning is life.
10. Taking responsibility for others is a very natural way of life here.

By examining the language patterns of the respondents, especially the predicates of their sentences, another issue surfaced. The three representational systems described in Neuro-Linguistic Programming (NLP) literature (Bandler, Grinder,1979) were used to examine the predicate structures. These were the Visual, Auditory and Kinesthetic modes. Of the 14 people, 10 demonstrated a strong usage of Kinesthetic terms such as:

> "give it a whirl"
> "I was kind of stuck there"
> "pick this up in your mind"
> "working stuff out together"
> "alot of tumbling around in the brain"

One respondent used auditory predicates throughout such as:

> "not capable of expressing myself"
> "to magnify Jehovah's name"

Interestingly enough, this person (more than any of the others) claimed she was quite musical and had given piano lessons at one time. The man who began farming recently at age 50 seemed to use both Kinesthetic and Visual systems. Another man was primarily visual, using phrases like:

> "that's pretty hard to describe"
> "have to see it before I can do anything"

While this is a very tentative analysis (especially since NLP is a fairly new field), there would be some fascinating questions to address in further research which examines the linguistic patterning of adult learners. A starting point of inquiry might be: Does a person's representational language structure indicate their (a) occupational identification, (b) personal interests/-

avocation (c) pattern for accessing memory, (d) meaning structure or world view?

Using Freire's (1968) concept of generative themes in a person's reflection about their life, another issue theme emerges - Themes of Oppression. Examining the data, the question was asked, "Are there some themes which appear as limits or boundaries to people's learning and personal development? It is best when themes of oppression are identified by the respondent since it is from such a consciousness that oppression can be liberated and transformation can occur. This analysis is thus offered in a tentative way with the hope that it may spark additional work with adult learners in these areas.

Tentative Themes of Oppression

1. Women's desire to continue learning and growing is being stiffled by husbands' attitudes. Elements of this were mentioned by three-quarters (3/4) of the women in the case study sample. The problems ranged from husbands who don't want to travel when their wives want very much to expand their horizons to husbands who don't want their wives going to classes and becoming more independent.

2. The need to control tempers was a common theme for men. All but one man described this aspect of themselves. As pointed out by one consultant, Jill Tarule (developmental theorist), "such concerns can inhibit taking any risks - trying anything new...this introduces a caution about one's involvements and, often, a wariness of others." Thus, this theme may be a growth inhibitor in the learning and development of these men.

3. The plight of the small farmer in rural Vermont was experienced by two of the men and mentioned by many others that we talked to throughout the study. While the political rhetoric in the state conveys support for the struggling farmer, many feel that this isn't borne out by the actions of those setting milk prices, or in the regulatory inspections by officials who tend to be biased toward the big business farmer. Because

of these struggles, many small farmers are being forced to sell and many others are fearful of their futures.

4. Several men and women described significant times in their lives when they were not treated with respect because of their lack of educational or economic status. Not having a high school degree was a definite obstacle for job advancement. Not being an established citizen of the community was another barrier. Also, in a couple of cases, not speaking fluent English (French Canadians) resulted in being taken advantage of by those in authority.

5. Illness emerged as not only a common event of significance in people's lives, but also as a theme of oppression. As such, it is connected to statements by several respondents about their frustrations in obtaining good medical advice and proper health care. Being placed in a dependent role to a doctor who dispenses information as one would pills, without taking time to discuss the situation, was a source of much frustration.

Looking for themes of oppression within adult learners' "stories" may be an important element in attempting to understand the reasons why some adults do not take advantage of educational or social service opportunities. That is, if a person is struggling with either a real or perceived obstacle in their lives, this may be a condition which prevents them from movement in constructive directions. This may suggest that adult learners, especially those who are "underserved," be enabled to recognize and deal effectively with those generative themes in their lives which restrain rather than liberate their actions.

Cognitive Profile Analysis. To provide additional data on adult learning modes, we utilized the cognitive profile research being done by a colleague, Dr. Charles Letteri at the University of Vermont. This research examines the processes of learning in light of one's position across seven cognitive style continuums. These dimensions have been identified and investigated as single bipolar elements which reflect certain variations in the way people approach problem solving situations. The seven dimensions are: (1) Category Width; (2) Cognitive Complexity-Simplicity; (3) Scanning; (4) Leveling-Sharpening; (5) Reflective-Impulsive; (6) Field Dependent-Independent and (7) Tolerance for Incongruity.

Over the past four years, the staff at The Center for Cognitive Studies which Dr. Letteri directs, has discovered two specific types of Cognitive Profiles - high academic performers and low academic performers. As measured by standardized tests, The Cognitive Profile significantly associated (P=.01 or better) with high achievement levels in academic performance is: Complex, Sharpener, Tolerant for Ambiguous Information, Analytical, Narrow, Focuser, Reflective. The low academic profile is: Simple, Leveler, Intolerant for Ambiguous Information, Global, Broad, Non-Focuser, Impulsive. (See Appendix E for Cognitive Profile material).

Individual subject profiles usually demonstrate a mixture of these two polarities with some dimensions being indifferentiated, or in-between these two extremes. As explained by Letteri, (1979):

> None of the individual cognitive style dimensions alone are able to separate low performers and high performers into significantly different (P=.05) and differentiated groups. It was not until four dimensions were compared and matched that low performers/high performers were separated into two significantly different and differentiated groups. (p.77)

Thus, when at least four of the seven dimensions on an individual profile are significantly differentiated between the two cognitive polarities, one has either a high (Type I) or a low (Type III) cognitive profile. The Type I profile describes the antecedent and necessary cognitive skills utilized by individuals for high levels of achievement. The Type II cognitive profile indicates vascillation in problem solving skills and the Type III profile indicates a lack of these basic skills, predictive of poor academic work.

In our Case Study research, the three interviewers administered the seven cognitive tests to each Co-Investigator (See Appendix E for sample cognitive profiles of Co-Investigators) and the results were analyzed by Dr. Letteri and his assistant, Susan Kuntz. The following statement summarizes their findings:

> Profiles of the 14 case studies follow precisely the distribution curve in terms of the number of individuals falling into each of the three profile types for each group tested. Regardless of age approximately 10% are found in Type I and Type III categories and 80% within the Type II profile. Based on this distribution and the relationship which does exist between profile types and areas such as academic performance, occupational success and satisfaction, we would find no difference should exist between this specific rural adult population and a cross-section of any other adult population. In other words, given opportunity for academic experiences for example, these rural adults would perform as well as any other group of students in terms of achievement.
>
> There are, however, several factors which must be taken into consideration for an adult population in general and a rural population in particular. Among these factors any assumption that adults are not capable of profiting from and succeeding in formal educational settings is fallacious, except for that approximately 10% of the population whose cognitive profiles mitigate against academic achievement. Therefore, this specific sample of

> adults could be expected to achieve the normal range of success expected of any population in formal educational settings. Given this statement, any assumption that the content, level of sophistication, or mode of presentation for any educational project must be at a reduced level for adults in general or this population in particular is likewise fallacious.
>
> A third factor having direct implications for the first two is the assumption that this specific population of adults or any other population of learners can be introduced to new or different information without first taking into consideration the individual learner's cognitive structure. By cognitive structure I am referring to a stable, hierarchically organized, body of prior knowledge that is substantively relatable to the new information and can serve as the anchoring ideas for the proper assimilation of the new information. This factor is not a limitation on what can be taught, but rather an element of instructional design which must be attended to in order to facilitate learning for this or any other population of students.
>
> A fourth factor is related to the delivery system of any educational experience for a rural population. Regardless of the content or the mode of presentation or the level of sophistication, the information must be brought to these students in their local communities and at times which do not severely disrupt their normal day activities.
>
> If the above factors are attended to in the design and implementation of learning experiences, be they sewing or physics, we can expect the rural adults in this sample to perform and profit from these experiences within the normal range of expectations for a similar population regardless of age or formality of experience.

Methodological Assessments. Because this study not only explored the substantive issues of self-directed learning, but also how to examine such phenomena, it is appropriate to discuss what we learned from our methodological approach. This section will deal with the usefulness of each methodological tool as well as discuss some overall assessments of this particular case study approach. First, some specific protocol assessments:

1. Milestone exercise was a good beginning because it gave people a chance to tell their life stories and became a reference point for later discussions. Besides helping to establish a rapport, it oriented Co-Investigators to how learning is connected to life events.
2. Coping with Conflict exercise brought out another dimension of learning - learning through adversity. It also provided good indicators for assessing a person's developmental stage as well as further evidence of a person's cognitive style and problem solving patterns. It thus helped to provide a more complete and balanced picture of a person's openness and readiness for learning.
3. Cognitive Profile tests were more obtrusive than originally planned, even though most of them were visually oriented and puzzle-like, rather than typical paper-pencil tests. They provided indicators of a person's abilities in technical, information processing, and problem solving areas and would be more useful for persons engaged in formal educational programs.
4. Learning Style exercise helped to uncover motivational data which was rooted in one's past as well as link these reasons for learning to the actual approaches taken to self-directed learning efforts. It also revealed that most self-directed learning uses rational, step-by-step modes, but that often this was preceded by preliminary actions such as visualization, modeling, and/or consulting with someone for help. It revealed that the respondents tended to use multiple resources in their learning efforts; however, relying primarily on other people.
5. Modes of Thinking exercise confirmed the everyday use of rational thought processes but also revealed people's awareness of, and comfort with, other modes of information processing including meditating, dreaming, psychic awareness, and "back-burner thinking."
6. Future Projection exercise helped people identify unfulfilled dreams and intentions, often producing totally new material not previously discussed. Some connected

these dreams to desires for further education, thus this tool could be very helpful in setting individual long-range learning goals.

7. Self-to-Self exercise was a good, reflective way to end the long, intensive sessions. For many, it was perhaps the most difficult exercise because of its self-conscious mode, but everyone seemed to approach it with honesty. Responses from this exercise provided further indicators of a person's developmental stage.

8. Guglielmino Self-Directed Learning Inventory was used in the first few hours of the case study interviewing. This inventory of 58 statements about self-directed learning (using a 6-point rating scale of "Almost never true" to "Almost always true") proved to be inappropriate for the population we were dealing with. In the questionnaire several references are made to classroom situations and to the use of traditional learning resources (i.e., books, libraries) which didn't fit the nonformal learning experiences of our respondents. Another problem was that the rating scale was confusing to people and thus the interviewers needed to intervene too much in the process. Therefore, we have set aside this data, not believing it to be helpful or valid.

Overall, the combination of exercises provided a means to uncover a wealth of information about the Co-Investigators that would not have been possible had traditional surveys or questionnaires been used. They also served as building blocks, linking the past with the present and future, surfacing data in an iterative rather than a linear fashion. A useful way of visualizing this process might be to consider it as a helix, building from small beginnings to larger expressions of reality; that is, everytime a revolution is completed, it builds on what has already occurred, thus being more than the sum of the parts. This, again was consonant with the approaches of naturalistic inquiry, and was considered to be a virtue of the study.

While the exercises used in the study were considered helpful, they did have some drawbacks when measured against the canons of pure naturalistic research. The interview protocols we utilized were prepared in advance so were not entirely open-ended. Nevertheless, every effort was made to build in spontaneity and responsive probing, and to make the interviewing process as unobtrusive as possible. In retrospect, we realize that the data from the more open-ended portions of the interviews is not only richer in content, but tends to represent expressions of fact rather than opinion. While both of these expressions were important in our study, we would encourage other researchers doing exploratory research to emphasize questions which elicit descriptive, empirical data over those which call forth opinions (often about subjects people have never been asked about previously).

Another aspect of methodological assessment is the examination of the research model itself. Did it work? Are there any conditions for it to be effective for others? As researchers, we feel the model we developed enabled us to explore new dimensions of adult learning with a balance of structure and openness. We had direction and structure with the conceptual framework, guiding questions and interview protocols. We also made sure that we were responding to unanticipated issues and content from both the Co-Investigators and the Co-Interpreters. We needed this flexibility and responsiveness in order to integrate new perspectives which could change or refine our initial approaches.

While this flexibility might seem somewhat confusing and inconsistent, we feel that it worked towards strengthening our responsiveness to the people and the settings which we were investigating as well as providing a balance of objectivity through the Co-Interpreters who helped clarify and probe aspects of the study which may have been overlooked by us.

You might ask, "Is this kind of approach to research applicable to other types of studies or designs? It would seem to be appropriate for research designs that are intentionally involving multiple publics because it does enable various groupings of people to participate in a meaningful way. Thus, if it's important to gain the perspective of multiple groups and if the study is somewhat more epen-ended than the more conventional research, I think that this collaborative model or something similar would be quite useful. One of the conditions for its effective operations is however, a strong management of all of the pieces of the puzzle, so to speak. It's fine to have team work in teaching or learning or research but unless there is strong leadership in helping to move the team along, in keeping track of the pieces that sometimes get lost through the cracks, and providing an ongoing support and sense of direction, this kind of research would not work. Thus, the Principal Investigator or team leader should have good planning and managerial skills.

Implications/Discussion

A discussion of implications usually deals with inferences and generalizations drawn from the data analysis. With case studies, which focus on description and understanding rather than correlation and inference, one is forced to think about generalizing in a different way. As explained by Stake (1978), in case study work it is the researcher's intention to add to the reader's understanding of a situation by clearly and fully describing that situation. From the particulars of the description the reader can then determine whether the case matches up or approximates experiences, knowledge or structures within his/her own context. Thus, the onus of generalization is shifted from the researcher to the reader. Stake (1978) calls this kind of recognition, "naturalistic generalization."

> Naturalistic generalizations develop within a person as a product of experience. They derive from the tacit knowledge of how things are, why they are, how people feel about them, and how these things are likely to be later or in other places with which this person is familiar. They seldom take the form of predictions but lead regularly to expectation. They guide action, in fact they are inseparable from action.

The discussion of implications of our findings will focus on different audiences, programs and educational systems affected by or impacting adult education.

Self-Directed Learners. As the target audience for our study, we'd like to begin this discussion by centering some thoughts on the learners, themselves. In fact, we'll let some of our Co-Investigators speak for themselves. During the follow-up visit with them, we asked several questions about the way they perceived the study and its implications. One common response to the question of the impact of the study on them was that it was a self-revelatory experience.

> "I think it's helped me know myself better - made me think about how I solve problems and why."
>
> "I think it was educational - made me think about other things."
>
> "Think it has. Started to realize that myself is a little more important than what I thought originally."
>
> "Well, when you sit down and read something about yourself, then you kind of wonder - do I know myself really as well as I thought I did?"
>
> "It brought back your whole life."
>
> "I kind of think - well, gee - maybe I got a little more to offer people. I guess I never thought I did have, but maybe I do have something that..."

It was clear for the three Co-Researchers that the reading of the case summaries was the most significant moment and climax of the study for the respondents. Following this reading, we asked an open-ended question about anything else they'd like to say about the study. Some typical responses:

> "Looking at the project, I can see its value. I found it interesting."
>
> "In the beginning I had less opinion of this study. I didn't understand where it was going, but now I can see and feel it's very important."
>
> "I enjoyed it. We talked over lots of stuff I used to take for granted."
>
> "I had a lot of questions before you came, but you've already answered them for me...I thought it was a study, but I really did, I learned about myself, quite a lot. I didn't expect that...I'm glad that I can help in this way, you know."
>
> "I can see its value now, finding out...'cause at first I didn't know what you was up to."
>
> "I think it's a good thing. I think that it opens up some of these ideas to the point where you think a little more...and it starts your mind working again, you know."

One of the implications of these kinds of responses seems to be that self-directed learners could benefit from an opportunity to reflect upon and understand themselves and their learning processes. While they enjoy doing things on their own, they came to understand themselves more clearly as "learners" and "problem solvers" through this study and appreciated the chance to do so. While we don't know whether this awareness will affect them or their continued learning in the future, we do feel that these people demonstrated a marked change in their images of self as an active learner in a natural, nonformal setting may be pivotal to reaching and serving the vast population of "underserved" or "educationally disadvantaged" adults. In a common sensical way, why would people who have little formal education or little history of educational success seek out learning opportunities unless they're desperate or they have a sense that they already have competencies as learners and can handle a formal setting?

If these suggestions have some validity, then it would seem important for programs which attempt to reach the illiterate population or the underserved - whether in the military, in prisons, in Adult Basic Education, or even industry - to consider the use of some outreach efforts which focus on a consciousness-raising experience similar to ones used in this study.

Basic Skill Development. Another implication for the adult learner deals with the concept of competency or basic skill development. While we can't generalize our findings of the competencies demonstrated in self-directed learning processes to other adult populations, there is enough evidence of this phenomena to warrant the following conjectures:

1. What would happen if educators who are working with (or trying to reach) adults with basic skill needs started from the premise that these people already have some skills in processing information, selecting resources and problem solving - developed through daily encounters with problems and challenges? With this assumption they would then proceed to identify these skills, involving the person in this process. In doing so, the adult learner might realize his/her strengths and natural competence as well as become conscious of and open to areas of improvement.

2. What would happen if functional competency programs seriously considered the processes of learning, thinking and problem solving developed by adults in their own particular styles? If these natural patterns and styles were identified (as in our study), one could begin with these antecedent skills and apply them to the learning of a particular content or task.

3. What would happen if a job training program began with a process for identifying, with participants, the cognitive competencies, interpersonal skills, problem solving patterns they bring with them from another job or from self-directed learning efforts? Such a self disclosure of the underlying processes and patterns of thinking and responding could generate a self-directed or job-structured program for improvement, development and application of such processes to new job tasks.

As you can see, the common thread running through these conjectures is the importance of the professional's mind-set when approaching clients with basic skill needs. Our suggestion is that educators approach clients from an expectation of competence rather than deficiency.

Delivery System Services. Both our Co-Investigators and Co-Interpreters felt that there were some implications for how adults would obtain better information and resources for learning. Concerning how these rural adults prefer to receive help with their learning, a common theme was through personal contact and through useful information or demonstration. In addition, some of the Co-Investigators offered specific examples of how such information could be delivered:

> "Think it would be far more advantageous to society if formal education was less concerned about granting degrees and more interested in general information. Think formal education could assist in offering general seminars (explanations) to the general public - that isn't tied to a degree but is public service in nature."

> "Maybe with small groups in homes."

> "Like the model of visiting nurses - 'visiting educators.' These folks would come to small towns and meet where people could get to - for short periods of time. These events should be well publicized and use demonstrations to show what the finished articles are like. If formal education did this, a big field would be opened up."

One respondent, the man who had begun farming at age 50, was particularly concerned about the problem of reaching people who aren't likely to attend meetings and workshops. He explained:

> "(Extension) should find ways to reach these people. And a lot of people don't want to be reached but they'd have to find a way to get to them to interest them. A lot of people don't want to go to meetings. They're working hard all day, at night and this and that. They'd have to be reached in some other source."

Later, he described how people are coming to him out of curiosity to see how he has survived so well at his new role of farmer. He believed this could become a model for others as farmers are helped to see themselves (as well as outside experts) as resources for each other.

When the Co-Interpreters (12 consultants) engaged in a discussion of delivery system implications, they also felt that these people would respond more to human contact and social interaction than technical or nonhuman delivery systems. Also they felt it was important for information to be readily available within their own communities and homes. Penny Richardson noted that many people seem to utilize television in their learning efforts and suggested its broader use in reaching the long-distance learner. She is also concerned about matching up the learner's self-directed learning style with appropriate, instructional designs of programmed learning. (Note that this is further developed in her prospectus paper, included in Appendix F .)

One of the implications of our findings is that while people seem to be getting along fairly well with their own learning and enjoy doing it on their own, that if given the opportunity and encouragement, these people would also enjoy expanding their horizons, discovering new interests, especially when these relate to some unfulfilled dreams and desires. We can say that these people appear to be hungry and thirsty for learning, especially when this allows them to grow and develop.

In order for this continued learning to occur we believe that delivery systems need to be personal, practical and easily accessible. To us, this translates into community development of information networks. Enabling people to become resources and teachers for each other is one aspect of such an effort. Offering access to information sources outside the community is also very important. A learning center, such as a library or a storefront, where such an information exchange can be coordinated might be essential. Perhaps the "visiting educator" idea would be a helpful model for the outside expert who wishes to enter the community and serve as a catalyst and resource for the development of specific learning or study groups. It would seem that if people in a community - even in a rural, isolated setting - were made aware of how much learning and exploring is going on in their midst, they would be more likely to take advantage of these resources. An active exchange between adult learners in a community could replace boredom, loneliness and a sense of isolation that one often hears about in rural communities.

Postsecondary Education. When one looks at the kind of study we conducted with undereducated rural adults, one's first impression is that it probably doesn't have anything to say about formal educational programs, much less those in postsecondary education. But, as Stake and others have said about case study work, the attempt to portray a holistic and thorough "slice of reality" can often enlighten the processes and experiences of people in other contexts. With this possibility in mind, we'd like to discuss some ways in which this study raises questions about the structures and practices in postsecondary education.

First we need to state an assumption which we feel has a great deal of validity. From all the research to date on self-directed learning, including our Tough replication with rural, undereducated adults, we can assume that most adults engage in learning efforts which are planned and directed by the self. With this in mind, one needs to examine the implications of this for the growing number of adults choosing to re-enter formal educational systems. Are these adults being perceived by admissions personnel, advisors, professors and other postsecondary education officials as having some experience with guiding their own learning? Are they being treated as people with a rich storehouse of knowledge and expertise that emerges from experiential learning efforts? Do curriculum offerings as well as instructional processes take into account a process of learning which develops from self-directed learning? If other postsecondary education institutions are similar to ours, these questions raise serious doubts about the willingness and ability of traditional programs to effectively respond to the phenomena of the adult learner in their midst. We continuously hear complaints from adult learners which reinforce these concerns. If postsecondary education decides to respond to the adult learner, the implications for rethinking and redesigning educational offerings are outstanding. Such a venture would even raise the important question of who is an adult learner? Might the undergraduate (or even secondary student) share some common characteristics with adults in the ways they go about their learning, within and outside of the formal structures?

Another aspect of postsecondary education's role in this adult learning arena can be found in its outreach efforts to the broader community and the state or region. Here we're talking about efforts to offer courses and programs off-campus to meet the needs and interests of specific constituents. The cautionary advice from this research is to not assume several things:

1. That adults are motivated to learn primarily for degree or certification goals;

2. That adults need a highly structured and teacher-directed learning context;
3. That existing courses and instructional designs can easily be transplanted to other contexts and serve adult populations without serious restructuring;
4. That the learning interests of adults are primarily keyed to practical or technical concerns rather than personal growth, exploration of new interests and humanities-oriented content.

A third area for consideration in postsecondary education is in the domain of professional training of adult educators. For the impact that this could have on the field of adult education, this is perhaps the most critical area. Programs which prepare adult educators or retool existing personnel ought to take seriously the research findings and implications of self-directed learning. Perhaps an effective way to understand this phenomena is to build into the training programs some hands-on exercises (similar to those used in this study) which would personalize the concepts and processes of adult learning. We feel strongly that until educators understand their own approaches to learning, thinking and problem solving, they will find it difficult to comprehend and identify with the nature and concepts of self-directed learning. In our institutions, we have experimented with two courses which attempt to do this and have noted very positive results. A reassessment of self in light of one's motivations, learning style and cognitive frameworks seem to trigger a deep and sensitive identification with the aspects of adult learning stressed in this study.

Policy Implications. A great deal of discussion among our twelve Co-Interpreters centered around policy issues stimulated by our study.

Of course it would be inappropriate to recommend policy on the basis of a small-scale exploratory research effort. But it is appropriate and possible to examine the findings from an indepth study in light of questions and issues it surfaces. These, in turn, can speak to policy in such a way that existing policies get reassessed and new policies investigated. This section will therefore address policy questions and issues which have been raised by the Co-Interpreters as well as the researchers.

Federal level policy with a capital 'P' certainly boils down to how monies should get spent; that is, making priority determinations in the context of limited resources. How monies should get allocated at the Federal level in Adult Education at a time of extremely low level funding is, I'm sure, a difficult question. One could assume that policy makers in federal agencies are looking for evidence of high quality programs and research which provide clear directives for solving problems like adult illiteracy. But here's the catch. What if a lot of existing programs and policies are not reaching or touching or even understanding the bulk of adult learners, including those with literacy needs? Many researchers and keen observers of the adult education scene are saying just that - including Pat Cross, Harmon and Hunter, Jonathan Kozol, Allen Tough, Ron Gross, Roger Hiemstra. Hiemstra has recently published a monograph from Syracuse University called "Policy Recommendations Related to Self-Directed Adult Learning." This summarizes a two-week workshop conducted during July of 1980 at Iowa State University. It is available through The Division of Educational Development and Administrative Studies, School of Education, Syracuse University.

If there is any truth in these repetitive claims, it would seem that policy makers would do well in supporting efforts to examine this situation. What would this call for? Certainly a reassessment of existing policies is an obvious rejoinder. To do this, issues related to the existing research findings in adult learning research can be helpful.

1. The issue is whether the adult learner will be allowed to maintain his/her own agency and control over the learning process or whether adult learning will be taken over by educational institutions and mass marketing enterprises. It would be so tempting for post-secondary education to put together new degree programs for the life-long learner and pull adult learning down the primrose certification path.

   Discussing this potential outcome of misinterpretation of ours (and others) data, several of our consultants felt strongly that a code of ethics and perhaps a bill of rights needs to be established to protect the adult learner in a mad dash marketing of life-long learning.
2. This is not to say that adults - including the ones we spent time with - do not want help with their learning. Many of them do. A second policy issue here is what kind of help are adult learners interested in? Also, how do they want that help delivered? But you'll notice that these questions are phrased in the perspective of the adult learner. This suggests that we should not presume we know what people need/want. We've done that

enough in education and it doesn't work. Even the results of broad survey needs assessments don't often match up with the realities of what's really on people's minds.

While our findings cannot be used to answer these questions, we did hear some interesting remarks from some of our respondents about these points. One man said,

> Think it would be far more advantageous to society if formal education was less concerned about granting degrees and more interested in general information. Think formal education could assist in offering general seminars (explanations) to the general public - that isn't tied to a degree, but is public service in nature.

When asked if she had any ideas for how formal educational institutions should respond to adult learners in a rural setting, this 74-year-old woman suggested a new delivery system model.

> Like the model of visiting nurses - 'visiting educators.' These folks would come to small towns and meet where people could get to - for short periods of time. These events should be well publicized and use demonstrations to show what the finished articles are like. If formal education did this, a big field would be opened up.

These suggestions from people who have not been impacted by formal adult education programs by the question, "Would it be helpful to engage such 'underserved' populations in a more direct fact-finding dialogue about what is important to them as learners and what could further that process for them?" As Warren Ziegler says, we don't usually ask the people who are the supposed beneficiaries of our policies and programs what it is they want because we underestimate their capacity to respond and overestimate our competence in determining what they need. Perhaps it's time to shift the emphasis in our policies from needs to wants, especially when that precipitates the involvement of the people who are the "least served and in most need" (another issue that could be examined?).

3. One of our consultants, Penny Richardson formally with the Lifelong Learning Project, was impressed with what the developmental and the cognitive style analyses uncovered about these adults. She felt that we did learn some things about these people's cognitive abilities and the factors that shaped their present developmental stage and that this knowledge could be used in designing materials and delivery systems appropriate to individual profiles. She called for small 'p' policies dealing with curriculum and delivery system issues - especially for the isolated, long-distance learner.

For instance, some of the cases clearly point to obstacles to growth and learning. But it is also clear that these obstacles (whether cognitive or attitudinal) are not permanent and in fact are often identifiable to these people. One policy issue for curriculum people is how to help people move beyond the obstacles to learning at a time in their lives when they're developmentally ready for such a transition or transformation. It's the notion of the "teachable moment."

4. A few last words about funding priorities at the federal level. In some ways, the budget cuts in education may be a blessing in disguise (Dare we admit that?). There are some programs at the state level as well as in post-secondary education which should be reassessed and perhaps put to sleep. They're the ones which are operating under old assumptions, old rules and often in worn out, impenetrable institutional structures. What is called for now in education - more than ever - is a fresh, more informed and updated paradigm concerning learning. At the federal level this translates into providing funding to people and programs which are committed to fresh, innovative approaches to understanding the phenomena of adult learning.

5. One quite unexpected implication has emerged as a common theme running through reactions of several educators to our research. The descriptive accounts of one's thinking and learning processes from our rural adult respondents have often triggered a sense of identification from professional educators. These awarenesses came to light in one of our Co-Interpreters' retreats with academic consultants last February after we had all spent some time with the cases. People at that retreat session continuously commented on how they identified with one or another of our Co-Investigators saying things like "I tend to do that too when I'm trying to think through a project" or "Yeah, I sometimes get answers to a question in my dreams too." Now, certainly

this is not meant to gloss over the differences between any of us but it is to underline the reality of common ground between people who strive to learn from their experiences, grow in understanding, and move on in new directions.

It has been suggested by a few consultants that this personal identification phenomena be taken seriously and utilized to further more empathy and understanding among policy makers and institutional personnel who are often removed from direct contact with learners. One way to do this would be to use the case studies from this study as the stimulus for policy deliberations. Another person suggested that policy personnel engage in a similar process of reflection on their own learning, cognitive and developmental processes. Through such a self-study, people in decision-making positions might develop more appreciation of the clientele they serve, by discovering some common ground they share with them in the area of self-directed, autonomous learning. It would seem that policies and programs that are informed by personalizing the experience of others as well as facts and figures could be more enlightened and effective.

Research Implications. In an exploratory study, more questions than answers get raised. This can be helpful if these questions lead to further research which builds on the implications of exploratory findings.

Several research areas seem to be important next steps. These suggestions come not only from our study, but from other literature and research related to self-directed learning. In addition, our twelve consultants who functioned as co-interpreters suggested several potentially useful research directions. Stated as research questions, some of the most promising are:

1. What is the interaction between one's self-directed approach to learning and one's cognitive style profile and one's developmental stage? Is there congruence between all three aspects?
2. What are the immediate and long-range effects of a research intervention (such as the intensive one in this study) on an adult learner's goals, aspirations, actions?
3. What is the nature of nonformal information networks used by adult learners for obtaining resources needed for their learning projects? Are these perceived as adequate, effective, dependable, valid?
4. What does an adult's cognitive profile suggest about effective ways of learning or delivering learning services?
5. How do adults' learning and cognitive styles compare to the format and approach of existing adult education offerings in a community? In job training?
6. What might be psychological and social obstacles to learning and development among "undereducated" or disadvantaged adults? That is, control of anger, low self-concept, fear of formal educational settings, etc.
7. What impact might the exercises used in this study have on (a) policy makers, (b) adult educators, (c) higher education students, (d) human service personnel?
8. What is the relationship between an adult's cognitive and developmental skills and his/her children's academic achievement and social development?

III. DISSEMINATION PHASE

Nature of Dissemination

Dissemination is typically conceived of as the final stage of a project where the findings are scattered and circulated to interested parties. However, as stated earlier, this study operated in a different fashion. As portrayed in Fig.3, p.18 of Section II, dissemination processes were cyclical throughout the project as we attempted to obtain feedback on tentative findings from several professional sources. These periodic dissemination activities enabled us to have, in essence, a built-in evaluation process. Comments and questions from various audiences, helped us refine our next steps as well as reconsider the analysis from our previous steps. We feel that this use of dissemination is in keeping with naturalistic study since it seeks multiple perspectives to a body of information in order to clarify and elaborate upon its meaning.

Advisory Council

Although the grant proposal did not specify this, we decided to organize an Advosory Council to serve throughout the first phase of the grant. Representatives from the University of Vermont, Vermont State Department of Education, Vermont Human Services Department, Vermont State Colleges, private colleges and community colleges were selected. As such, this group was charged to provide advice and council during the critical beginning stages of the project. In addition, we intended to promote professional development in adult learning areas by organizing a series of colloquia sessions. Examples of these included presentations by consultants Allen Tough (Replication Phase), Warren Ziegler (Literacy and Self-Empowerment), Charles Letteri (Cognitive Styles), Peter Woolfson (Ethnoscience).

The last session in April, 1980 involved the dissemination of findings from the Tough replication and an outline for the Case Study approach. Several helpful comments were made relating our study to others in Extension and Adult Basic Education which dealt with the same population of rural adults.

Conference Presentations

Presented in chronological order:

1. February 8, 1980. Project Director presented at state-wide Adult Basic Education meeting. Participation in day-long planning sessions.
2. March 6, 1980. Presentation of tentative research findings to invited group of adult educators at the annual American Association for Higher Education Conference in Washington, D.C.
3. May 7-9, 1980. Project Director had informal talks and presentations to individuals and small groups on tentative Tough and Case Study findings at the annual Adult Education Research Conference in Vancouver, B.C.
4. June 22-24, 1980. Project Director gave presentations and participated in paper critiques at invitational conference on "Adult Learning Potential: An Agenda for the Future", Hilton Head, S.C. This conference was sponsored by USOE Teacher Corps and The Adult Learning Potential Institute at American University. Two monographs of these presentations were published under the title, Symposium on Adult Learning Potential: An Agenda for the Future (September, 1980).
5. June 22-24, 1980. Research Associate attended an invitational conference on adult learning and development in Denver, CO. This was sponsored by the FIPSE network on Adult Development.
6. July 9-11, 1980. Research Associate presented tentative findings at Adult Learning Conference sponsored by the University of Maine/Orono.

7. October, 1980. Informal presentations at Vermont ABE state-wide meeting at Goddard College and the annual Adult Education Association meeting in St. Louis, MO.
8. January 7-9, 1981. Informal presentations at The Competency Based Adult Education Conference in New Orleans.
9. January 13, 1981. Project Director Keynote speaker at annual Vermont Extension Professionals Conference in Middlebury, VT.
10. April 1-3, 1981. Presentation in symposium on "Naturalistic Inquiry Methodologies in Adult Learning Research" at annual Adult Education Research Conference in DeKalb, Ill. (Chaired by Roger Hiemstra, Syracuse University with second paper by Jon Peters and Michael Powers, University of Tennessee).
11. April 23, 1981. Project Director invited to present at Interagency Panel on Adult Learning Research, Washington, D.C.
12. April 23, 1981. Research Associate presented at conference on "Literacy and Self- Empowerment," featuring Paulo Freire and Jonathan Kozol, University of Vermont.
13. May 15, 1981. Project Director invited to present at Second Annual Minnesota Evaluation Conference on "Case Study Methodology in Educational Evaluation," Minneapolis, MN.

Case Study Retreats/Prospectus Papers

As part of the cyclical dissemination process, we organized two weekend meetings or retreats during the case study phase which brought together some Vermont adult educators from our original Advisory Council with selected outside consultants. Our intention for these meetings were threefold. First, we wanted to receive some critical feedback on the case study phase, especially in areas of analysis and interpretation. A second rationale for these meetings was to develop a series of monograph prospectus papers dealing with our case study findings from multiple perspectives represented by the consultants. A third overarching intention was to attempt to create a challenging learning environment among the participants - all of us being adult learners as well as professional educators. We felt that all three objectives were successfully reached during the two meetings. The first retreat session was October 23-25 in Bolton, Vermont and involved the following people:

Kenneth N. Fishell, Ph.D., Vice-President, Academic Affairs
    University of Vermont

Pat Fontaine, Counselor, Howard Mental Health Services

Lloyd Kelley, Director, Adult Education Services
    Vermont State Department of Education

Sue Kuntz, Research Associate, University of Vermont

Charles A. Letteri, Ph.D., Assistant Professor of Education
    University of Vermont

Penelope Richardson, Ph.D., Assistant Professor of Education
    University of Southern California

Thomas B. Roberts, Ph.D., Department of Learning and Development
    Northern Illinois University

Andrea Rogers, Consultant

Warren Simmons, Ph.D., Project Officer, Home, Community and Work
    National Institute of Education

Robert E. Stake, Ph.D., Director, College of Education - CIRCE
    University of Illinois at Urbana-Champaign

Jill Tarule, Ph.D., Coordinator, Title III, Task Force on
    Institutional Reorganization, Goddard College

Allen Tough, Ph.D., Department of Adult Education
    Ontario Institute for Studies in Education

Greg P. Voorheis, Project Consultant
    Vermont Comprehensive Employment and Training Office

Winifred I. Warnat, Ph.D., Director, Adult Learning Potential
    Institute, The American University

Warren L. Ziegler, President
    The Futures-Invention Associates

During this session, several presentations were made by participants, explaining key concepts and theoretical frameworks in their particular disciplines and how these connect up with the NIE study. (See Appendix G for schedule). Many issues and concerns were raised which sharpened the analysis of the case study summaries. At the end of this retreat, participants submitted brief descriptions of the prospectus topics they would begin to develop. Following the retreat there were further exchanges between several participants and the research team. This correspondence included critiques of the retreat sessions, elaborations on issues generated and exchange of scholarly papers.

The follow-up sessions were held on February 14-16, 1981 at a church retreat center in Burlington called Rock Point. The participants involved in these meetings were essentially the same as the Bolton group, with the following changes:

1) Pete Kelly was replaced by Sandra Robinson, Vermont ABE program.

2) Allen Tough was replaced by Roger Hiemstra, Syracuse University.

3. Andrea Rogers was replaced by Larry Daloz, Director of a FIPSE project at Vermont State Colleges.

By this time all participants had received the 14 case summaries and were prepared to discuss them in more depth than at Bolton. Time was also devoted to critiques of the individual monograph prospectus papers, (See Appendix H for schedule). All who participated felt that it had been a very challenging and stimulating retreat process. What seemed to work extremely well was the chance to follow-up the first meeting with a more structured and intense second session. The ideas and insights generated from the Rock Point interactions were invaluable for the researchers, much of it incorporated into this report.

The prospectus topics are presented below and the papers are in Appendix F . We are attempting to locate a prospective publisher and at that time the monograph would be completed.

1. Roger Hiemstra. "Self-Planned Learning: Policy and Research Needs."

   Addresses the questions of policy rights, resources and intervention modes in dealing with self-directed adult learners.

2. Connie Leean. "Preparation for the Development of a Grounded Theory of Adult Learning: A Learner's Perspective."

   The development of Adult Learning Theory from the perspective of rural, little-educated, self-directed adult learners.

3. Charles Letteri & Susan Kuntz. "Cognitive Profiles: Examining Self-Planned Learning and Personal Thinking Styles."

   Presentations of results and implications of cognitive profile data on the 14 case study participants.

4. Penny Richardson. "Instructional Implications of Adult Learning Styles for the Distance Learner Specialist."

   Examines the factors to be considered in designing instructional techniques for the distance learner.

5. Thomas Roberts. "Modes of Thinking."

   An attempt to code the case study data from a states of consciousness perspective and compare results to cognitive profile findings.

6. Burt Sisco. "Who are the Undereducated?"

   A critique of the language used to describe the population investigated.

7. Bob Stake. "A Fundamental Isolation."

   An exploration of the lack of compatibility - a fundamental isolation - between adult education institutions and service deliverers and these rural, self-directed adult learners.

8. Jill Mattuck Tarule. "Growth Promoting Experiences as a Basis for Programs for Rural Adults."

   Examines the case studies from the perspective of experiences which are growth promoting as well as growth inhibiting, and the program implications of these findings.

9. Greg Voorheis. "Occupational Choice-Making."

   Examines the issues involved in making occupational choices, as portrayed by the case studies, and implications for employment and training programs.

10. Winifred Warnat. "The Family Life Cycle and Learning: Variations of a Theme."

    An investigation of the alternative forms of family represented in the case studies, and the implications for adult learning.

11. Warren Ziegler. "The Human Condition and the Learning Stance."

    A case for not intervening in the learning efforts of self-directed learners.

Higher Education Presentations

Throughout the last year, several presentations of this research have been given to classes in higher education. Again, this provided not only a chance to disseminate but also to learn from the questions and discussions that ensued.

1. Presentation to research seminar class in UVM's College of Education; Dr. Charles Letteri, instructor (March, 1980).
2. Presentation to evaluation team at University of Illinois-Champaign-Urbana's CIRCE, Dr. Robert Stake, Director (March, 1980).
3. Presentation to staff and students at Iowa State University, Adult Education Program; Dr. Roger Hiemstra, instructor (March, 1980).
4. Conducted Graduate Course in Adult Learning at UVM's College of Education, Dr. Connie Leean, instructor (June 30 - July 11, 1980).
5. Participated as resource person and process evaluator in course on "Policy Implications of Self-Directed Learning Research" at Iowa State University; Dr. Roger Hiemstra, instructor (July 21-25, 1980).
6. Conducted Module in "Adult Learning in Nonformal Settings" at UVM's College of Education; Dr. Connie Leean and Dr. Burt Sisco, Co-instructors (February - May, 1981).

State-Wide Conference

To fulfill a proposed goal of sponsoring a state-wide conference on adult learning, we organized and co-sponsored (with a Vermont State College's FIPSE Project) The First Annual Vermont State Conference on Adult Learning Research on March 5-6, 1981. (See Appendix I for brochure). Called "Portraits of Adult Learners: The Vermont Experience," this conference was held in The Northeast Kingdom where the research took place and featured Jonathan Kozol as a Keynote speaker. Over 100 people attended the day-and-a-half discussions of the two research projects. These participants represented teachers and administrators of adult programs as well as human service personnel. Their evaluation and informal feedback was very favorable, many stating that it was an important first attempt at disseminating adult learning research as well as a unique opportunity for people in diverse fields to interact with each other. (See Appendix J for conference schedule).

An added delight for us was that one of the Co-Investigators came (all 14 had been invited) and in a large group discussion near the end of the conference, volunteered her "testimony" about what the NIE project had done for her. This was especially meaningful to us since she was the one subject with English as her second language. Her courage in facing professional educators and freely voicing her opinions was in itself an indicator of our project's impact.

Media Coverage

Since this was the first NIE project of its kind in Vermont, we felt it important to seek some visibility for our efforts. In the early stages of the project, we used media coverage as a way of introducing ourselves to communities in The Northeast Kingdom. Two local newspapers ran stories of the proposed project which all the interviewers in the Tough replication later used in gaining entry into people's homes. We also wore University of Vermont badges which we designed specifically for this project. Both of these strategies were suggested to us when we made initial visits to these communities, talking with various townspeople. The notion was that if we were perceived as legitimate researchers we would have an easier time gaining entry in places where people suspect strangers or possible solicitors. Evidence collected from the interviewers suggest that this advanced notice was very helpful.

Later, as the research was underway, there were a few appropriate occasions for using media again. For example, the Bolton Retreat was described (after the fact) and a news release sent out from The Bolton Resort office. Also, to advertize the "Portraits of Adult Learners" Conference, articles and radio announcements were made. Follow-up news articles were also written.

The bulk of coverage occurred in the final stages of the grant, when local newspapers and University public relations interviewed us concerning the project findings and implications. This involved two news articles and a radio broadcast.

From these efforts, we feel that we were quite successful in raising people's awareness and stimulating interest about the NIE project in our University Community and the State of Vermont. (See Appendix K for copies of these news articles)

APPENDIX A

Tough Replication Interview Protocols

(Reproduced at discretion of Dr. Leean, Director of NIE Adult Learning Project. Do not make copies or disseminate without expressed permission of Dr. Leean at the University of Vermont)

INTERVIEW PROTOCOL

(Introduce yourself. If you were not able to make an appointment, use name tag and newspaper articles to gain the person's trust.)

Notes: Interviewee has to be over 25. Get all learning projects you can at the beginning, then complete questionnaire in full for each project. Perhaps 15 to 20 minutes spent visiting to develop rapport will aid in identifying learning projects. Pertinent questions to find out learning efforts might include:

What activities have you been involved in?
What's been going on in the past year?
Do you watch TV? Do you listen to the radio? What are your favorite shows?

A. Learning Projects

1. "Our research is about what sorts of things people learn. Everyone learns, but different people learn different things--and in different ways.

   I'm interested in listing the things you have tried to learn during the past year.

   When I say 'learn' I don't just mean learning the sorts of things that people learn in schools and colleges. I mean any sort of specific effort at all to learn something, or to learn how to do something. Perhaps you tried to get some information or knowledge--or to gain new skills or improve your old ones.

   Can you think of any efforts like this that you have made during the past 12 months?"

(Pause and record.)

2. "Try to think back over all of the past 12 months--right back to (month) last year. I am interested in any deliberate effort you made to learn anything at all. Anything at all can be included, regardless of whether it was easy or hard, big or little, important or trivial, serious or fun."

(Pause and record.)

3. "We want to get as complete a list as possible, because we think that people make far more attempts to learn than anyone realizes. We can include any sort of information--knowledge--skill--or understanding at all that you have tried to gain--just as long as you spent at least a few hours at it sometime during the past 12 months. What else do you recall?

(Pause and record.)

4. "Now, I have a list of some of the things people learn. It may remind you of other things that you have tried to learn during the past 12 months. I will read each one and think about whether you have tried to learn something in that area." ("If you wish to read the list yourself, you're welcome to.")

(Introduce and use Handout A. You may wish to embellish the list with some specific examples as you go through it.) (Pause and record.)

5. "OK, thank you. That gives us a fairly complete list. If you suddenly think of something else you have learned, though, please tell me."

B. Hours Spent

"Now I want to find out how much time you spent on this effort. This sheet will help us estimate the number of hours you spent at your actual efforts to learn this, plus the number of hours spent at planning and preparing for that learning."

(Hand out Sheet B. If possible, pin down and record just what the learning episodes were. For example, you could ask, "How did you go about learning this? What did you do? . . . Was there anything else you did to learn it? Examples of the activities you might record are: watched a pro, listened to records, read, . . . practiced, . . . attended. . . . This list of activities is primarily for your benefit in helping the person estimate time accurately: we may need the data for other purposes also.)

PLEASE NOTE: We would like you to get an estimate of the actual number of hours spent during the learning effort. Put this number in the blank indicated on Data Sheet #1. In addition, please circle the number, as you have done before, which best estimates the hours.

C. Duration

"Now I'm interested in discovering when you started the learning project and how long you continued with it. Think back for a moment and then tell me when you started the project and how long you continued with it."

(Pause and record time span or duration by days, weeks or months.)

D. Active/Non-active

"Would you say you are still active with the project or not."

(Pause and record Active or Non-active, using the following definitions:

(1) NOT VERY ACTIVE--that is, you have dropped it or completed it, or you have set it aside for awhile (or you are spending much less time at it than you were before);

(2) DEFINITELY ACTIVE--that is, you are definitely continuing this learning effort right now, and you are spending about as much time as ever about it.

E. Degree of Learning

"We want to know about how much knowledge, information, and understanding you gained as a result of this learning project. Think about where you were when you began and where you are now.

Would you say that altogether:

(1)	you learned a large amount or changed a great deal;	(very much)
(2)	you were about halfway between (1) and (3);	(some)
(3)	you just changed or learned a little.	(very little)

F. Degree of Enthusiasm

"How enthusiastic have you been about having this new knowledge and skill?"

(1) very enthusiastic;
(2) quite enthusiastic or fairly enthusiastic;
(3) not especially enthusiastic.

G. Benefits to Others

"Let's set aside your own benefits for a moment, and look at any benefits for other people. Your new knowledge and skill might have been of some benefit to your family, your friends and relatives, boss, your company or organization, your field, or even to people who live in other places. (Use examples that are appropriate for the learning effort.) Would you say that the benefits to others is:

(1)	to a fairly large extent;	(very much)
(2)	medium (about halfway between 1 and 3);	(some)
(3)	only to a small extent.	(very little)

H. Motivation

"Now I'd like you to think back to when you began this learning effort. What would you say was your main reason for getting started? Let me read you some examples and then you tell me which one best fits."

1. To improve my basic living situation; dealing with everyday problems
2. To improve my basic learning skills; reading, writing, arithmetic
3. Work toward a degree, certificate or license (credit)
4. To improve my income
5. To improve my skills and knowledge for my job
6. To fulfill a job requirement
7. To prepare for a new job
8. General interest or curiosity
9. Other, specify ____________________

I. Who Guided Learning*

"Now we're interested in having you tell us who or what helped guide your learning. That is, who decided what you would learn--and how you would learn--whenever you spent some time trying to learn?

1. A group (led by professional or leader, instructor)
2. A group (friends, neighbors, family)
3. One person (an instructor, teacher, expert)
4. One person (a friend, neighbor, family member)
5. An object (T.V. program, workbook, magazine)
6. Yourself (taking major responsibility to plan it)
7. Mixed (a combination of two or more) Specify: ____________________

(Do not bother asking for details about the particular planner or methods, but whenever these are mentioned please record them.)

J. Who (or What) was Main Resource

"Now, I'd like you to tell me who or what actually was the primary resource that you used in learning this knowledge or skill. We'll use the same list we just used."

(Pause and record.)

K. Summary Questions

"That finishes this part of the questions. Now I would like to ask you some questions that summarize these learning efforts." (Go to Data Sheet #2)

L. "Now before we end, I would like to find out a little more information that will be essential to us in analyzing all this data. Do you mind a few more minutes? It won't take long at all." (Go to Data Sheet #3)

*Please read carefully the three pages from Tough that we've included in your packet so that you're clear about what we're looking for in these categories and how the planner is different from the main resource. (Note: We are now emphasizing technique or resource for "J", rather than "Teacher".)

HANDOUT A

Some Things That People Learn About

Recreation

a sport or game; dancing; bridge

Hobby

learning a new craft, collecting something, photography, musical instrument

Home/Farm Improvement

home repairs, woodworking, winterizing, gardening, decorating, new farming techniques, new machinery, maintenance

Job/Career

finding a job, choosing a career, professional or technical skills, new job responsibilities

Schooling

evening classes, tutoring, correspondence courses, special licensing (EMS), helping with child's education, learning a language

National/International Affairs

following political campaigns, international crises, inflation, etc.

Personal

physical fitness, appearance, self-awareness, dealing with personal problem, drugs

Social/Relationships

raising a child, infant care, marriage, family relationships, friendship, family planning

Nature/Conservation

ecology, birds, conserving energy

Financial

personal finances, insurance, investing, purchasing something, business management

HANDOUT B

Hours Spent

We need your best guess about the total amount of time you spent at all aspects of this particular learning effort during the past 12 months.

Please include the time you spent reading--listening--observing--or learning in some other way--if your main purpose during that activity was to gain and retain certain knowledge or skill. In other words, we will include all the times during which at least half of your total motivation was to gain certain knowledge or skill and to retain it until at least two days later.

In addition to the time you spent at the actual learning itself, please include all the hours that you spent, during the past 12 months, at deciding about the learning, planning the learning, and preparing and arranging for it. This can include any time spent at deciding whether to proceed with the learning--deciding what to learn--deciding how to learn--deciding where to get help--seeking advice about these decisions (from other people or from printed materials)--traveling to some of the learning activities, such as a meeting or practice session or library--arranging appropriate conditions for learning--choosing the right book or person for the actual learning--obtaining that book or reaching that person.

Of course, you cannot remember exactly how many hours, so just give your best guess. If you wish, just choose the closest number from the following list:

1. [illegible]r less
2. 7
3. 14
4. 24
5. 40
6. 70
7. 100
8. 140
9. 180
10. 225
11. 300
12. More than 300

APPENDIX B

Case Study Interview Protocols

NIE ADULT LEARNING PROJECT

Case Study Interview Protocols

I. MILESTONE EXERCISE

1A. Starting with when you left public school, tell me what the significant events in your life have been, up to and including the present. (List them)

1B. Now let's see if we can place these events on a timeline and see how it looks.

1C. (After this activity, say) "Let's move on and see if we can cluster (organize) your life events into general themes or broader time periods." If subject is unclear about these instructions, say, "For example, it looks like you have some themes here like..." (work themes, family themes, personal themes). (Using a colored pen cluster or combine the times on the line according to a theme)

1D. (After the person has organized the themes on the timeline and talked about them accordingly, say:) "Looking over the timeline and general events or themes that you have identified, can you give me a name or a phrase that best describes each of these periods of time?

1E. Why did you do this? What major event/events occurred in this time period that made you call it that?

1F. During these major events were there any people who stand out in your mind as helpful?

1G. During these major events were there any materials or things you used that were helpful?

1H. Would you say that you experienced any learning during these major events? If yes, tell me about it.

II. LEARNING STANCE QUESTIONS

Introduction: We'd like to ask you some questions about how you tend to go about your learning when you do it on your own. Let's use one of your learning efforts as an example. Choose one learning project which is self-planned that you talked about in last December interview.

Motivation

1. Thinking about this particular learning project ______________________________, think back, way back, to a time before you were involved in it. Do you recall anything that may have triggered your interest in this? A conversation with someone, a memory from your past, something you read or heard, etc.
2. When you started that project, was it a conscious decision to start or did it "just seem to emerge?"
3. Did you have any expectations about that learning effort?
   Did others expect anything? (any pressures or external expectations)

Motivation (continued)

4. Was there anything or anyone that particularly helped you make a decision to learn that thing?

   Was there anything or anyone that hindered this decision?

(Transition: Now we'll be moving on to the time after your initial decision and talk about how you went about planning and doing this learning.)

Planning/Managing

5. Now, thinking about the time after you decided to start this project, what was the first thing you did?

   And then? And then, etc. (continue this probing to complete chronology of episodes)

6. Why did you go about it this way (refer back), rather than some other way (give example)?

7. Do you recall ever needing something and not getting it (or finding it)?

8. Did you ever ask for any help from anybody else (in family, neighbor, extension agent, etc.)? If so, how did that work?

9. Did you ever change direction or do something different than the way you first planned it? Why?

10. How did you organize your time for doing this? Was there a definite schedule or did you just do it whenever you could find time?

11. Were there any times that you almost dropped it - or left it - or put it down for a period of time? Why?

(Transition: Now we'll move on to the time after the completion of this learning project and talk about how you felt about this effort.)

Evaluation

12. How did you know that you had completed this learning effort? (How did you know that you were finished?)

13. Did you ever say anything to anybody about this project? Or show anybody the final product? What did they say?

14. How satisfied were/are you with the results?

(Transition: Finally, we'd like to talk briefly about some further thoughts you have about this learning and what it may mean for other things you decide to learn.)

Projection/Implications

15. Was there anything that you learned in this project that you have applied to any other task or effort?

Projection/Implications (continued)

16. Do you feel in any way different about yourself as a result of this project?

17. Have you helped anybody else learn or do something different as a result of this project?

18. Has it given you any other ideas of things you'd like to look into?

19. Overall, are you aware of how you tend to go about learning (or solving a problem related to learning)?

20. What do you think shapes the way you tend to learn? (Family tradition, your personality style, a habit developed as a child, etc.)

III. MODES OF THINKING

Introduction: Let's assume you're thinking about something, like a problem or a project you're working on (something at home or at work) or about yourself or your family or about life in general.

What we're interested in is having you help us understand the usual ways you go about thinking and solving problems.

1. To begin with, are you doing anything else when you are thinking?

2. Is there a specific place or location where you tend to do most of your thinking?

3. Are there any particular times of the day or night when you are (or find yourself) thinking?

4. Do you try to do something about what you're thinking right away or do you store it and come back later?

5. If you do put it in the back of your mind, what brings it out for you to do something with it? (examples: crisis, sights, sounds, conversations, dreams, prayer, visions, etc.)

6. Now, can you give us an example of a time when you found an answer to a question/problem? How did this happen?

(Note: If people respond in a more conscious, rational-type of problem solving, follow up with the next questions. If their example is a more intuitive type, use the following questions as probing ones.)

7. Have you ever found an answer to a question/problem in another way - like in a dream or at a time you weren't consciously thinking about it? (If yes), give us an example.

8. Does your answer come usually in the form of:

____ 1. picture
____ 2. diagram
____ 3. words/phrases
____ 4. anything else (please explain)

MODES OF THINKING (continued)

9. Do you remember any feelings you had when this happened? (If yes), please explain.

(Transition: You've given two different examples of ways you think or find an answer to a question or problem - the first one we can call the rational approach - that is, thinking something through in a logical, step-by-step way.)

10. The other way is not so systematic or step-by-step. But rather, this may happen when you least expect it. This notion may be somewhat new to you, but can you help us describe or name this way of thinking?

11. Do you have a sense of which way of thinking you use more often?

12. Which of these do you favor or like the best? Why?

13. Do you remember thinking this __________ way (referring to the non-rational way) when you were a youngster? Or is this way of thinking somewhat new or recent for you?

14. Do you think there's any difference between the way men and women tend to think or solve problems?

IV. COPING WITH CONFLICT

Introduction: Think back to a time that was particularly difficult for you (a crisis, a tragedy, a personal loss). What did you do about that?

(Probe for:) Thought processes.
Coping mechanisms.
Importance of that conflict in their life.
Transitions that may have resulted.
What they learned about themselves.

V. REFLECTION AND PROJECTION

Introduction: We've spent a lot of time talking to you about learning from your past and the things you've presently been involved in. Now we're going to talk to you a little about the future - what you see up ahead for you or what you would like to have happen in your life.

Futures Exercise: Think about the year 1990 - 10 years from now. That's a little further out than we ordinarily tend to think or dream. For instance, you probably have thought ahead for a year or so, planning a special vacation or a building project, or buying a large purchase. Once you have an idea or picture of this kind of goal, you have have taken steps to make it happen. Sometimes things don't happen exactly the way we've planned, but often our dreams do take shape as we move towards reaching them.

So, we're asking you to do some thinking ahead which isn't that different from other times in your life - except, perhaps, that it is further out there - 10 years from now.

Futures Exercise (continued)

Try to see yourself in 1990 doing something that you really want to do (suggest they close their eyes to do this and feel very relaxed). This is something that you've been wanting to do for some time and now, in 1990, imagine that it's really happened. Remember, that in 10 years time, a lot of things can change so that you should be thinking that anything is possible. Anything that you see as desirable, as something you've always wanted, can now come true. Take some time now if you want to just relax into this future picture of yourself in 1990. When you are clear about what you see for yourself, just describe it.

Additional Reflection Questions

1. When you think about your whole life and what you want to accomplish during it, tell me what you think would give you total self-fulfillment in life. That is, something about your life that would make you feel complete, happy, totally satisfied.

2. Do you feel you have some potentials, some strengths, that haven't been tapped yet? Some things that you haven't explored about yourself?

3. In light of all of these hopes and dreams for the future, what things would you like to learn or feel that you should learn in order to have these dreams come true?

4. We know people learn for many reasons. Three main reasons or motivations are:
   (1) learning for practical purposes, like fixing something or improving something
   (2) learning for a future goal, like a better job, a degree, or more money
   (3) learning for fun or just because you're interested

   Would you think about all the learning you've done recently and tell me what percentage of that is in any of these three areas?

   %
   (1) practical ____
   (2) future goal ____
   (3) fun/interest ____

5. What projects do you foresee up ahead that would involve some additional information, or skills?

6. If there were a small group of people around here interested in learning the same thing as you, would you become involved in a group learning effort? Have you in the last couple years been involved in a small group effort that might have resulted in some learning. Was it a good or bad experience?

7. Who do you tend to rely upon for advice or help when you're learning something new?

8. What other sources of information do you tend to use most often in your learning efforts - i.e., radio, T.V., books, magazines, newspapers, brochures, etc.? Do you choose certain ones for certain kinds of tasks? (Note: Keep track of combinations, should they respond as such.)

Additional Reflection Questions (continued)

9. Related to your learning efforts, do you feel that more information, support, or guidance would be helpful to you - either in the planning stages or the doing stages?

10. It looks like we have _____ minutes left.

    As an overall question, I would like you to stand back from all this for a moment and just describe yourself to yourself. Just talk about who you are to yourself - not to me, but to yourself, since you know yourself best. You know who you are deep down so you can be fully honest and sincere. Take some time now to think about this if you want. (Note: If there's a problem getting started, use the sentence stem..."To myself, I am....")

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CASE STUDY FOLLOW-UP SESSION

1. Do you agree with what is said about you in these case study descriptions? Are there any changes you feel you'd like to make? (Please explain.)

2. Looking back over our various conversations, what stands out as being the most important to you?

   Probe for:
   - a. Is there any way that our talking has led to any different thinking or acting on your part?
   - b. Has our talking together changed the way you think about yourself or the world?
   - c. Is there anything you'd like to change about the way you think, learn, solve problems?

3. Is there any person who you feel is helping or supporting you in your learning at this point in your life? Anybody who is assisting you in changing or growing?

4. What do you care about most right now?

5. Do you think formal education (i.e., high school, colleges, universities) should so anything about your learning and your interests? (Please explain.)

6. Now that we've spent so much time together, do you have any questions or thoughts about this study or anything else, for that matter? (Please elaborate.)

LEARNING PROJECTS EXERCISE

Directions

Think back over the last 12 months and recall any efforts to learn something new or to further develop some knowledge or skill. Each learning project (1) should be a deliberate effort to learn, (2) take at least 7 hours of your time and (3) can be something you learned on your own as well as in a classroom setting. First, list as many as you can recall. Then, consult the second sheet for some suggestions which may trigger additional learning efforts.

Learning Projects	Time	Motivation	Planner	Main Teaching Resource
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				

KEY:

1 = 7hrs or less
2 = 8-30 hrs.
3 = 31 or more hrs.

G = Goal
I = Interest
A = Activity

P = Professional
S = Self

O = Other people
M = Materials
S = Self

Milestone Exercise Time Line

Directions: Locate on the time line below the significant events you identified in your life since completing school. Add approximate dates for these events.

Left School

Present

APPENDIX C

List of Co-Interpreters

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APPENDIX D

Condensed Profiles of Co-Investigators

CASE STUDY - CO-RESEARCHER PROFILES

Mrs. French	**Mrs. Lacroix**	**Danny Keller**	**Mr. Ambrose**	**Mr. Paquette**
Sex: F	Sex: F	Sex: M	Sex: M	Sex: M
Age: 44	Age: 44	Age: 27	Age: 52	Age: 63
Educ: 7 yrs. ABE	Educ: 8 yrs. NON-ABE	Educ: 12 yrs. NON-ABE	Educ: 7 yrs. NON-ABE	Educ: 8 yrs. NON-ABE
Occup: Tailor	Occup: Self-emp.	Occup: Plumber	Occup: Farmer	Occup: Retired Farme
• Great Time (1949) A-13	• Childhood (1950-54) A-14-18	• In Trouble - Unsettled (1969-71) A-16-18	• Great Experience Travelling (1946) A-18	• Working A Farm: "Tied Down Period" (1930-70) A-14-54
• Nice Time (1954-56) A-18-20	• Honeymoon (1955-56) A-19-20	• Enjoying Job "Own Boss" (1972-75) A-19-22	• Hardship - Raising Family (1948-73) A-20-45	• Having and Raising A Family (1938-70) A-21-54
• Adjustment Time (1958-62) A-22-26	• Family (1959-68) A-23-32	• Stagnant (1976-77) A-23-24	• Accomplishment of Dream of Own Business (1977-79) A-49-52	• Semi-Retirement: "Period of Not Being Tied Down" (1970-80) A-54-63
• Hard Time (1964-66) A-28-30	• Home - Settling In (1969-80) A-33-44	• Finding What Want To Do (1978-80) A-25-27		• Staying Busy (1980-present) A-63
• Family Crisis 1967-73) A-31-37				
• Great (1974-80) A-38-44				

PLEASE NOTE: A=Age

CASE STUDY - CO-RESEARCHER PROFILES

r. Rabe	Mr. Bolduc	Mr. Rock	Mrs. Petit	Mrs. Moss
x: M	Sex: M	Sex: M	Sex: F	Sex: F
ge: 38	Age: 49	Age: 52	Age: 73	Age: 60
duc: 5 yrs. ABE	Educ: 5 yrs. ABE	Educ: 12 yrs. NON-ABE	Educ: 8 yrs. NON-ABE	Educ: 12 yrs. NON-ABE
ccup: Laborer	Occup: Unemployed	Occup: Retired	Occup: Retired	Occup: Housewif
Working Theme (1952-77) A-10-15	• Growing Up & Working (1943-52) A-12-21	• Getting An Education (1945-48) A-17-20	• Very Long Time (1922-28) A-15-21	• No Problems (1937) A-17
Family Theme (1968-74) A-26-32	• In Armed Forces (Korean War) (1953-56) A-22-25	• Work & Community Service (1948-59) A-20-31	• Ready To Leave Always The Same (1928-29) A-21-22	• Exploring - New Experier - Excitement (1938) A-18
Illness Theme (197[illegible]) A-3[illegible]	• "Getting Married and On The Go" (1956-60) A-25-29	• Personal/Social Family Time (1968) A-40	• Hardest Time (1929-49) A-22-42	• Adjustment - Man Back frc war - Bad Experience - Help Them (1942-44) A-22-24
Schooling Theme (1978-80) A-37-38	• Personal Health - Kidney Related (1961-68) A-30-37	• Community Activities -- Very Feverish (1971-76) A-43-48	• Missing Children - Leaving Nest (1951-68) A-44-61	• Putting Your Foot Down (1950-55) A-30-35
Back To Same Old Rut - Fussing (1976) A-55	• Shock - Death (1970) A-39	• Health Concerns - Dealing W/Illness (1977-80) A-49-52	• A Resting Place-Sewing 'N Sitting (1970-79) A-63-73	• New Experier A Change - Whole New Thing (196(A-40
Back To Beginning (1976-80) A-56-60	• Choosing & Doing			

CASE STUDY - CO-RESEARCHER PROFILES

Mrs. Field	Mrs. Bell	Mrs. Desautel	Carrie Simpson
Sex: F	Sex: F	Sex: F	Sex: F
Age: [illegible]	Age: 62	Age: 24	Age: 75
Educ: 9 yrs. ABE	Educ: 8 yrs. NON-ABE	Educ: 12 yrs. NON-ABE	Educ: 18 yrs. NON-ABE
Occup: Practical Nurse	Occup: Housewife	Occup: Housewife	Occup: Retired
• Good Old Days (1960) A-15	• School (1933) A-14	• Exciting (1973) A-19	• Making Friendships (1923-26) A-18-21
• Confusing (1963) A-17	• Quite Disillusioned With Marriage (1935-39) A-16-20	• Routine (1974-76) A-20-22	• Awakening In Educ. Lif (1928-29) A-23-24
• Found Self - Still Problems (1964) A-18	• A Hope That Would Alleviate My Child's Problems (1942-47) A-23-28)	• Whole New Experience (1977-78) A-23-24	• Professional Growth - Becoming More Secure - Never Felt Insecure (1933-38) A-28-33
• Trying To Put Self At One With Self (1974) A-28	• Joy & Sorrow (1950-64) A-31-45	• Self-Fulfilling (Changing Times) (1979-80) A-25-26	• Mixture - Troubled Tim New Friendships People In Army - Exciting Ti (1941-45) A-36-40
• We've Come A Long Way, By God! (1979-80) A-33-34	• Living With The Hope of Meeting The Approval of My Creator (1970-80) A-51-61		• Everyday Events Settli Neighborly - Fun Summe (1950-52) A-45-47
			• Adjustment - Looking Ah Husband & Wife Unfulfilled Plans (1961-67) A-56-62
			• Adjustment To Widowhood (1968-74) A-63-69

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APPENDIX E

Cognitive Profile Material

Cognitive Profile Report

1. Dimension: Reflective - Impulsive

A. General Definition:

This dimension marks a subject's individual consistency in the speed with which hypotheses are selected and information processed.

B. Subject's Articulation

1. Reflective:

The Reflective subject will, take a sufficient amount of time to examine in detail all aspects of the presented problem, consider several alternative hypotheses, select one which satisfies all requirements and offer this as a response. The Reflective subject's first response is usually correct.

2. Non-Articulated

This subject's articulation indicates a tendency to react somewhere between these two extreme positions. As such, there is no actual conscious control exerted by the subject over this dimension - hence, the subject operates reflectively sometimes and impulsively others. This erratic behavior leads to indecision relative to responses and hence inconsistent academic behavior, particularly where high accuracy is demanded.

3. Impulsive

The Impulsive, unlike the Reflective, will make a decision relative to response based on partial and unorganized analysis of the task. This tendency leads to rapid although incorrect responding. The failure to succeed heightens frustration and either leads to more rapid and incorrect solution or a refusal to continue.

Impulsive subjects will tend to perform poorly in those academic areas that require analysis, reflection, careful consideration of variables and generation of hypotheses to reach solution. For example, Math, Science and problem solving.

2. Dimension: Focus - NonFocus

A. General Definition:

This dimension describes the extent and intensity of attention deployment to a given task. It measures the ability of a subject to attend to the specific elements of a task which are relevant to its identification and solution. These relevant elements are the basis for hypothesis selection and correct responding.

B. Subject's Articulation:

1. Focuser

The focuser when instructed as to the importance of a specific attribute, for example, size of a stimulus, and provided with a constant standard for measurement, is capable of attending to that specific dimension and is capable of disregarding irrelevant attributes, such as color or weight. This capability can be useful in providing the basis for a detailed, programmed instruction format. He/she can attend to a task that is well defined and for which he/she displays some degree of interest.

2. Non-Articulated

This subject's articulation is at the midpoint between the two extreme positions. This indicates a lack of consistent appropriate focusing strategies and a tendency for distractability and only partial analysis of the task. This will lead to either improper identification of the problem or utilization of improper information for the solution. In either case inconsistent performance in areas demanding high accuracy will result.

3. Non-Focuser

The Non-Focusing subject, when instructed, cannot attend to the specific elements of a task and displays a high degree of distractability, often deploying attention to irrelevant aspects. If these irrelevant aspects are appealing, familiar, or less complex than the relevant features, the Non-Focusing subject will employ these irrelevant aspects in task identification and solution. This leads to confusion in task identification and high errors rate in solutions offered.

3. Dimension: Narrow - Broad

A. General Definition:

This dimension marks a subject's consistent preference for the degree of inclusiveness (Broad vs. Narrow) in establishing the acceptable range for specified categories. It describes the structure of categories as a major part of the thought process.

B. Subject's Articulation:

1. Narrow

The Narrow subject has very well defined and definitive criteria utilized in identification of both essential problems and hypotheses or responses offered. Due to the high degree of discriminability demonstrated there is no confusion concerning the actual task, nor any vagueness concerning similarity to previously learned material. Hence error rates in these areas are low. The Broad subject tends to bring together all items with the slightest degree of similarity while the narrow subject maintains and utilizes very discrete categories for information.

2. Non-Articulated

The subject is between these extremes in this dimension and hence lacks control over this dimension. As a result, there is an inconsistent behavior which leads to a degree of confusion in information categorization. There are tendencies to demonstrate a lack of organization relating to learned information and a tendency to confuse this information with new data, leading to inaccurate identification, storage and recall.

Even if correct (or incorrect), this subject may not understand the reason for the evaluation, but be reassured just to "get it" sometimes. If the subject has high achievement motivation this can be quite frustrating and anxiety producing; and may lead to a questioning of her/his own abilities to "get it". Her/his uncertainty and inconsistency can lead to poor performance.

3. Broad

Broad subjects will tend to have unorganized and vague criteria by which to classify and categorize given tasks. If the task or elements thereof, or a considered hypothesis bears the slightest resemblance to a correct response or a task previously identified, the subject will classify it as similar and therefore the same. Hence, incorrect identification of problems, tasks and responses will result. This tendency proves upproductive in tasks requiring distinctive discrimination abilities, not only tasks requiring accurate responses and hypothesis formulation, but also in accurately identifying and classifying the essential task or problem. The Broad subject may tend to solve his own perceived problem rather than the presented one.

4. Dimension: Analytical - Global

A. General Definition:

This dimension marks a tendency of a subject to either experience items as part of a background, (Global), or to overcome the influence of an embedded context and view items as separate from background (Analytical). It identifies a wholistic as opposed to a partistic approach to problem solving.

B. Subject's Articulation:

1. Analytical

Essentially, an Analytical subject can "break down" complex tasks into component parts, name or label them and correctly categorize them and compare them to known information.

2. Non-Articulated

This subject's articulation places him/her between these two extremes. This tendency reveals an inconsistent pattern of information processing. Essentially, the subject does not know or cannot identify the essential elements to process. Sometimes he/she is accurate while at other times inaccurate and incorrect performance will result.

3. Global

The Global subject tends to view the task as a whole and is incapable of sorting the individual items for purposes of analysis or comparison. The Global subject, unlike the Analytical subject, lacks the capability of recognizing discrete items in a given task; items which may be essential to identification and solution. Hence, he/she has difficulty in even beginning many tasks or knowing how to proceed even when instructed. The whole problem is much too complex and confusion and even rejection might result.

5. Dimension: Tolerant - Intolerant

A. General Definition:

This dimension describes the individual's deferential willingness to accept perceptions at variance with his perceived knowledge, understandings or experience. It measures the extent to which an individual departs from a known given and accepts experiences he knows to be unreal.

B. Subject's Articulation:

1. Tolerant

The Tolerant subject is open to novel or ambiguous experiences and information. Ambiguity is not discomforting in any way. When confronted with a situation not in keeping with prior experience, the tolerant subject will examine it or attempt to do so. The novel or dissimilar may even prove to be quite attractive. The Tolerant subject, therefore, when confronted with evidence that he is wrong, will willingly accept both the evidence and the correction, or at the very least demonstrate a willingness to examine both sides of the issue.

This subject's articulation as Tolerant indicates he/she is open to examining evidence or data that is contrary to his/her beliefs or understandings. That is, when proven inaccurate, he/she will at least acquiesce to the correct response and accept it. However, if prior knowledge is not well learned, discernable and accurate, this subject may acquiesce without understanding why, or the basis of his/her inaccuracy. However, this articulation is more productive academically than an intolerant articulation.

2. Unarticulated

3. Intolerant

The intolerant subject will hold to current knowledge even when faced with information which demonstrates clearly that the current knowledge is inaccurate. There is a marked tendency to hold one's perceptions or one's perspective even when one or a variety of others is available or demonstrated. When faced with an ambiguous situation, the subject will tend to perceive the reality of the situation which most closely resembles his previous understandings or expectations for that part of reality. Once the intolerant subject "makes up his mind" it would be difficult to change that mind set. If forced to accept the ambiguous information and behave or perform on the basis of that information, the subject might acquiesce. However, he will be behaving contrary to his concepts of reality, and sooner or later, his performance or behavior will falter, lead to indecision and inappropriate responses on his part. If he does not "seek it your way", he might behave as if he did, but the behavior will probably be inconsistent. In academic areas, this does produce hardships for learning and achievement. If his initial perceptions are not accurate, appropriate, or acceptable, it will be most difficult to affect a cognitive shift in perception. This can be especially difficult in areas requiring cognitive manipulation of stimulus dimensions. For example, cognitively transposing a two dimensional figure into a three dimensional figure. It could also lead to complete acquiescence on his part. For example, "You tell me what I should see", or a constant checking behavior "Is that okay"?

6. Dimension: Sharpening - Leveling

A. General Definition:

This dimension describes reliable individual variations in assimilation in memory. It measures the manner in which an individual organizes memory images and relates these images to present information.

B. Subject's Articulation:

1. Sharpener

Sharpening subjects, relying heavily on visual memory, also tend to experience ease in successfully completing tasks requiring rote memory for learning and reproduction of episodic data for performance purposes.

This subject's articulation therefore indicates excellent recall for rotely memorized data and the ability to use memorized data as an accurate criteria to judge new data. This dimension indicates that this subject may tend to memorize correct responses to specific stimuli (questions, problems, tasks), but not necessarily associate this memorized data with any other information of a similar nature. He/she will not confuse it but depending on other dimensions in this subject's profile, he/she may not realize important necessary associations.

As a result, the ability to transfer new data to similar or dissimilar problems which require this new data (a process for example) for solution will be a difficult, if not impossible task. She will respond correctly to tasks or problems that are identical to the one she was taught, but have difficulty in applying this information to new tasks.

2. Non-Articulated

This subject's non-articulation places him at the midpoint between the two extremes. However, this indicates a tendency to blur and loose the sharp distinctions in memory needed for high accuracy in academic performance. There will be certain perhaps minor memory tasks which this subject can perform with an acceptable range of accuracy. The ability of this subject to discriminate accurately between somewhat similar stimuli is less than demanded by complex academic tasks. This subject will respond correctly to tasks or problems that are identical to the one he was taught but has difficulty in applying this information to similar but new tasks.

3. Leveler

Subjects at the leveling extreme tend to blur similar memories and to merge perceived objects or events with similar but not identical, phenomenon recalled from previous experience or learning. Subjects at the Sharpener extreme tend to maintain elements in their memory as different and distinct, although associated. There is no tendency to confuse similar items or to identify them as identical. As a result, incorrect identification or association of new data is at a minimum.

7. Dimension: Complex - Simple

A. General Definition:

This dimension describes individual differences in the tendency of subjects to construe the world and particularly the world of social behavior through multi-dimensional and discriminating perspectives as opposed to a uni-dimensional and simplistic perspective.

B. Subject's Articulation:

1. Complex

The Complex individual has knowledge available in his/her cognitive structure (knowledge base) many and varied distinct categories by which to categorize and in which to associate new data.

2. Non-Articulated

This subject's articulation as non-articulated indicates a tendency to have existing knowledge (cognitive structure) arranged in somewhat indiscriminate and unorganized categories. For some areas these may be quite specific and well defined (indicated by her testing results), but for others they will be poorly organized and lack specific associated details.

This inconsistency, or inability, to utilize prior knowledge successfully will lead to somewhat less than maximum performance in academic areas. It would appear that if this subject lacks a readily available category by which to define and identify new data, she will not know what to do with the new information, i.e. label or process it.

3. Simple

This subject's articulation indicates a tendency to have existing knowledge (cognitive structure) arranged in somewhat indiscriminate and unorganized categories and lack specific details. This inability to organize and hence utilize prior knowledge successfully will lead to less than maximum performance in academic areas. It would appear that if this subject lacks a readily available category by which to define and identify new data, he will either be incapable or refuse to perform. Basically, he will not know what to do with the new information, i.e., how to label or process it.

Type II Cognitive Profile

The analysis of the seven dimensions begins to describe a pattern or profile of cognition which tends to leave the subject confused initially and even if instructed she will tend to be unorganized and inconsistent in her processing procedures. This subject does not have consistent mastery or control over her basic cognitive operations and can only result in inconsistent performance which may be judged as mediocre or less by her superordinate others. Obviously any testing results should indicate this pattern also. This can lead to confusion on the part of subordinates such as teachers or parents, leading to the erroneous conclusion if she is right sometimes she sould be right all the time and expect this subject to "try harder". Try as she may, this subject is experiencing basic cognition difficulties and her "best" is inconsistency.

Conclusions

From an analysis of the testing data and associated Cognitive Profile, it is possible to conclude that:

1. This subject's overall Cognitive Profile indicates an inconsistent and uncontrolled cognitive (learning) process.
2. This inconsistency in learning will be widened by inconsistency in academic performance.
3. Inconsistent academic performance will be manifested in both classroom task and academic achievement testing results.
4. This Cognitive Profile will tend to remain stable, and inconsistent academic performance will tend to continue.
5. This subject's specific Cognitive Profile, although inconsistent, is usually associated with average academic performance, i.e. grade level achievement.
6. Basic dimensions of this subject's Cognitive Profile do not seem to project any severe difficulties academically.

Type III Cognitive Profile

Through research conducted at the Center for Cognitive Studies, this particular cognitive profile has been significantly related to low academic achievement. It suggests that the subject is having serious academic problems. Further, in analyzing the total cognitive profile, it seems to be apparent that tasks which require visual memory, accurate visual discriminations, formulation of tentative hypotheses and flexibility, will present him/her with difficulty. Subject areas such as Math, Science, reading graphs, charts and diagrams, transferring detailed visual information from one task to another, foreign language vocabulary, and perhaps reading musical notes, will not be especially favored by him/her.

If cognitive intervention is not applied, the subject will continue to experience these learning problems and it will serve to increase his frustration and difficulties with achieving success. This situation could transfer to his social environment and create additional problems for him/her. This cognitive profile can be augmented to some degree. The magnitude and direction of that augmentation will depend on the type and length of the intervention program. Modification through intervention has proven productive in terms of changes in academic performance. These changes have longitudinal consistency. The subject will not necessarily "unlearn" his present cognitive profile, but rather an alternative appropriate profile will be learned and practiced in order to demonstrate its effectiveness specifically in academic areas. The subject will usually prefer to use one profile for non-academic environments and the modified profile for the academic environments. Basically the intervention program provides the subject with alternative modes for perceiving, remembering and thinking.

Cognitive Profile Report

Subject: Mrs. Moss

Prepared by: Susan Kuntz
Center for Cognitive Studies

Dimension - Reflective/Impulsive

This dimension marks a subject's individual consistency in the speed with which hypotheses are selected and information processed. Impulsive subjects tend to offer the first answer that occurs to them even though it is frequently incorrect. The Reflective subject will, on the other hand, take a sufficient amount of time to examine in detail all aspects of the presented problem, consider several alternative hypotheses, select one which satisfies all requirements and offer this as a response. The Reflective subject's first response is usually correct.

This subject's non-articulation indicates the tendency to do partial analysis in problem solving. Sometimes she comes back to a problem but others she does not take the time to do a complete analysis of the problem presented. She indicates that she sees answers in pictures sometimes and feels great "relief" when this happens because "I've probably been looking for it (answer)". She has little control over how to do a complete comparative analysis in order to find the answer but her frustration subsides when she does "get a picture of what's going to happen and how it should".

Dimension - Focus/NonFocus

This dimension describes the extent and intensity of attention development to a given task. It measures the ability of a subject to attend to the specific elements of a task which are relevant to its identification and solution. The Focuser, when instructed as to the importance of a specific attribute, is capable of attending to that specific dimension and is capable of disregarding irrelevant attributes. This capability can be useful in providing the basis for a detailed, programmed instruction format. The NonFocusing subject cannot attend to the specific elements of a task and displays a high degree of distractability, often deploying attention to irrelevant aspects.

This subject's articulation is at the NonFocus end of the continuum. This indicates a certain confusion in task identification which is caused by distractability. In her discussion about going to college she indicates her lack of control over focusing when she says, "I think it would be a matter of sitting down with the books" and indicates the difficult time she would have doing this even though she indicated that she "certainly would like to try it". This lack of control over focusing together with partial analysis strategies can lead to the identification of irrelevant aspects in task solutions.

Dimension - Narrow/Broad

This dimension marks a subject's consistent preference for the degree of inclusiveness in establishing the acceptable range for specified categories. The

Narrow subject has very well defined and definitive criteria utilized in identification of both essential problems and hypotheses or responses offered. The Broad subject will tend to have unorganized and vague criteria by which to classify and categorize given tasks.

This subject's articulation as Broad indicates a tendency to confuse categories which have slight similarity into one. There is little control in her cognitive structure over the organization of data which goes into memory and thus performance is illogical and inconsistant. Actions are never completely analyzed or compared - "One thing leads to another"' which provides an unproductive classification of any task for storage and later recall.

Dimension - Analytical/Global

This dimension marks a tendency of a subject to either experience items as part of a background or to overcome the influence of an embedded context and view items as separate. It identifies a wholistic as opposed to partistic approach to problem solving.

This subject's articulation is at the global extreme of the continuum. She tends to experience things as a whole and thus cannot sort out individual items. When questioned about how she knows an answer, she replied, "just seems fit". Her broad and non-focusing strategies combined with global strategies lead to vague criteria and the "lumping" together of all things as one. She indicates that she does not think "step by step" but more apt to jump in". "I'd go nuts if I had to do it step by step".

Dimension - Tolerant/Intolerant

This dimension describes the individual's deferential willingness to accept perception at variance with his perceived knowledge, understanding or experience. It measures the extent to which an individual departs from a known given and accepts experiences he knows to be unreal. The Tolerant subject is open to novel or ambiguous experiences and information. The Intolerant subject will hold to current knowledge even when faced with information which demonstrates clearly that the current knowledge is inaccurate.

This subject's articulation as Intolerant indicates that usually she will accept her own perceptions. Novel experiences are not comfortable for her and she'd rather not entertain new ideas. In a discussion of men and womens' roles she indicates, "I'm not used to men going out separately. . . I think this separate business is for the birds." She will respect information which is at odds with that which exists in her cognitive structure. She cannot integrate it into her knowledge base because it does not match what is already there. As the previous dimension of her profile indicates, the existing knowledge base is poorly organized and associations are loosely linked so it follows that the new data is not easily integrated.

Dimension - Sharpening/Leveling

This dimension describes reliable individual variation in assimilation in memory. It measures the manner in which an individual organizes memory images and relates these images to present information. The Sharpening subject relies heavily on visual memory and had the ability to use memorized data as an accurate criteria to judge new data. Subjects at the Leveling extreme tend to use rote memory and repetition and thus have difficulty associating new information and organizing old.

This subject's non-articulation in this dimension indicates a tendency to lose sharp distinctions between items in memory. Subjects who are neither Sharpeners nor Levelers often blur items in their memory which are similar as well as forget it altogether with little understanding of why that happens, "my memory is like a sieve." Somehow she never assimilated this instance into memory or never learned how to efficiently store anything into memory so she immediately performs whatever task or often "it goes". This type of cognitive behavior lends itself to trial and error performance with little assimilation into a cognitive structure and is consistent with her entire profile.

Dimension - Simple/Complex

This dimension describes individual differences in the tendency of subjects to construe the world through multi-dimensional and discriminating perspectives as opposed to a uni-dimensional and simplistic perspective.

This subject's articulation is at the complex end of the continuum. It indicates a multi-dimensional perspective for viewing stimuli. When asked her theory on boredom she replied, "I mean there's so many things that. . . you don't have time to do!" Her total conversation indicates so many varied ways of looking at things. She has in her repertoire many categories to use for comparisons when integrating it with existing knowledge. Her total profile articulations, however, prevent this from efficiently happening. Therefore, storage and retrieval of this information is loosely controlled and erratic performance is the result.

Cognitive Profile Report

Subject: Carrie Simpson

Prepared by: Susan Kuntz
Center for Cognitive Studies

Dimension: Reflective/Impulsive

This dimension marks a subject's individual consistency in the speed with which hypotheses are selected and information processed. The reflective subject will: take a sufficient amount of time to examine in detail all aspects of the presented problem, consider several alternative hypotheses, select one which satisfies all requirements and offer this as a response. The impulsive subject, unlike the reflective, will make a decision relative to response based on partial and unorganized analysis of the task.

This subject's articulation is at the reflective end of the continuum. As such, she considers all alternatives before giving a response. This is demonstrated in The Modes of Thinking Excerpt when she discusses how she answers a question and replies with an episode of trying to phone a family member to see if they were coming. When she couldn't get through, she kept calling around. "I don't give up - track something down." Then she selects the alternative which best satisfies all requirements to answer her question. A comparative analysis is part of regular problem solving for a reflective subject.

DIMENSION: Focus/NonFocus

This dimension describes the extent and intensity of attention development to a given task. It measures the ability of a subject to attend to the specific elements of a task which are relevant to its identification and solution. The Focuser, when instructed as to the importance of a specific attribute, is capable of attending to that specific dimension and is capable of disregarding irrelevant attributes. This capability can be useful in providing the basis for a detailed, programmed instruction format. The NonFocusing subject cannot attend to the specific elements of a task and displays a high degree of distractability, often deploying attention to irrelevant aspects.

This subject's articulation is at the midpoint between the two extreme positions. This indicates that appropriate focusing strategies are available if she chooses to use them. However, she also may tend to be distracted by irrelevant data.

This inconsistent behavior is demonstrated in her response to several questions. The ease with which she can focus on pleasant thoughts is demonstrated with, "If it wasn't pleasant, I would just think of something pleasant." (Modes of Thinking, page 1). In the other extreme, she interjects non-relevant material into her conversations, "used to go visit a lady who lived in the next house up there; she's since died" (irrelevant to the conversation) (Reflections, page 1). This inconsistent focusing strategy, together with the reflective dimension, leads her to do a comparative analysis and look at all the alternatives, but sometimes select irrelevant data to concentrate on.

DIMENSION: Narrow/Broad

This dimension marks a subject's consistent preference for the degree of inclusiveness in establishing the acceptable range for specified categories. The Narrow subject has very well defined and definitive criteria utilized in identification of both essential problems and hypotheses or responses offered. The broad subject will tend to have unorganized and vague criteria by which to classify and categorize given tasks.

This subject is at the Narrow extreme of this dimension. She utilizes discrete categories for storage and retrieval. In her self-description, she gives a lengthy account of being a perfectionist and how her accomplishments are never quite satisfying. Her criteria is so narrow that it never quite fits that perfection category. "Somebody else will come in and say, 'Isn't that nice!' but to me, well, it's a little bit off there and there..." This narrow tendency, along with the reflective strategies, allows her to have well defined criteria for a comparative analysis and when she focuses on the relevant dimenisons, she is able to discriminate easily among categories and tasks.

DIMENSION: Analytical/Global

This dimension marks a tendency of a subject to either experience items as part of a background or to overcome the influence of an embedded context and view items as separate. It identifies a wholistic as opposed to a partistic approach to problem solving.

This subject's articulation is at the Global extreme. She tends to view the task as a whole, with little immediate concern for all the parts: "I think anyone who dislikes animals...is not a good person." This demonstrates little observation of the parts of the whole - "dislike animals" - like why, under what conditions, considerations of all the conditions that may be necessary to correctly understand the entire problem, "dislike animals." The Global subject will often put off a problem because the solution is too complex and confusing. "I think I'm sort of apt to put things off if they present so many difficulties I don't know just how to cope with." The narrow and comparative analysis skills allow her to correctly identify the difficulties, but seeing how it all fits into the whole is too confusing and complex ("like the will, for example").

DIMENSION: Tolerant/Intolerant

This dimension describes the individual's deferential willingness to accept perception at variance with his perceived knowledge, understanding or experience. It measures the extent to which an individual departs from a known given and accepts experiences he knows to be unreal. The Tolerant subject is open to novel or ambiguous experiences and information. The Intolerant subject will hold to current knowledge even when faced with information which demonstarted clearly that the current knowledge is inaccurate.

This subject's articulation is at a midpoint between the two extremes; however, there is a tendency toward Tolerance. Sometimes she is open to novel and new experineces and dares to take chances against what she knows. "When I was a kid, I didn't know how to swim very well, I still don't, but then I'd take chances - I'd go in deep water and splash around." This shows a tendency for thinking about swimming in deep water which she knew she couldn't do (at odds with what she knows), but a hesitancy to try it ("I wouldn't do it now.").

DIMENSION: Sharpening/Leveling

This dimension describes reliable individual variation in assimilation in memory. It measures the manner in which an individual organizes memory images and relates these images to present information. The Sharpening subject relies heavily on visual memory and has the ability to use memorized data as an accurate criteria to judge new data. Subjects at the Leveling extreme tend to use rote memory and repetition and thus have difficulty associating new information and organizing old.

This subject's articulation is at the midpoint between the two extremes, but indicates a tendency toward the Sharpening end. She is fairly able to maintain different and distinct elements in her memory. She has developed her own memory devices (diagrams of how to teach math), but also she uses visualization as a means of recall. She comments that rational thinking suits her the best "because you can work at it" and thus organize it for later recall. These simple mneumonics devices, along with narrow criteria and reflective strategies, help her to use memorized data as an accurate critieria to judge new data for categorization, storage and recall.

DIMENSION: Complex/Simple

This dimension describes individual differences in the tendency of subjects to construe the world through multi-dimensional and discriminating perspectives as opposed to a uni-dimensional and simplistic perspective.

This subject's articulation as Complex indicates that she has available in her cognitive structure many and varied, distinct categories by which to categorize and associate new data. This is demonstrated in her multi-dimensional description of herself - i.e. hard worker, happy, been hurt, doesn't cling to feelings, friendly, likes people, likes animals, perfectionist. In her own words, "I certainly have alot of interests, I always have." "The whole day ends too fast to do all the things you want to do." This high degree of category complexity, together with Reflective and Narrow strategies, could lead to much success in completing tasks. The initial tendency to view things Globally could, however, weaken the associations made between the different parts of each category and hinder the efficient and effective storage and recall so prevalent in her total profile.

The subject's total profile indicates a person who has the skills for above average success in related tasks. She takes a sufficient amount of time to make a complete and accurate comparison between the given problem and prior problems. She is able to define the problem accurately by specific category, for purposes of selecting appropriate solutions, and can select from the alternate solution strategies the one which most accurately satisfies the problem task as presented. This profile indicates a degree of inner control over accomplishments and thought processes. "No, I have to think it myself! I have to be satisfied with my accomplishments myself before I can feel good about it." She usually will experience success in performance and much of her learning can be self-directed.

Cognitive Profile Report

Subject: Mrs. LaCroix

Prepared by: Susan Kuntz
Center for Cognitive Studies

Dimension - Reflective/Impulsive

This dimension marks a subject's individual consistency in the speed with which hypotheses are selected and information processed. Impulsive subjects tend to offer the first answer that occurs to them even though it is frequently incorrect. The Reflective subject will, on the other hand, take a sufficient amount of time to examine in detail all aspects of the presented problem, consider several alternative hypotheses, select one which satisfies all requirements and offer this as a response. The Reflective subject's first response is usually correct.

This subject's non-articulation indicates a tendency to make incomplete comparisons and analysis of tasks. Sometimes a complete comparison will be made but other times no comparison at all will be made and the performance will be spontaneous--or in the subjects words - it just "pops out". In answer to questions about how she thinks or goes about doing a task her answers are erratic, sometimes detailed and sometimes general.

Dimension - Focus/Non-Focus

This dimension describes the extent and intensity of attention development to a given task. It measures the ability of a subject to attend to the specific elements of a task which are relevant to its identification and solution. The Focuser, when instructed as to the importance of a specific attribute, is capable of attending to that specific dimension and is capable of disregarding irrelevant attributes. This capability can be useful in providing the basis for a detailed, programmed instruction format. The Non-Focusing subject cannot attend to the specific elements of a task and displays a high degree of distractability, often deploying attention to irrelevant aspects.

This subject's articulation is at the focus end of the continuum. This indicates an ability to attend to tasks and select relevant data for the task. This subject's talent for applique, quilt making and upholstry require this skill. Focusing on things she sees in other parts of her life, she tries to copy them in her sewing. "Sometimes it doesn't turn out like the thing I saw, but it gave me an idea." She is able to abstract from given data that which is relevant for her specific task and adapt it for her own needs.

Dimension - Narrow/Broad

This dimension marks a subject's consistent preference for the degree of inclusiveness in establishing the acceptable range for specified categories. The Narrow subject has very well defined and definitive criteria utilized in identification of both essential problems and hypotheses or responses offered. The Broad subject will tend to have unorganized and vague criteria by which to classify and categorize given tasks.

This subject's non-articulation indicates a confused categorization of information. Even thoughshe has the skill to focus on one piece of information, she cannot adequately store that information for later use because her categories are not selected on clear and well-defined criteria. She sees an idea and does not store it exactly because she does not have the distinctions within a category to do so--such things as color, size, shape become variables in her sewing.

Dimension - Analytical/Global

This dimension marks a tendency of a subject to either experience items as part of a background or to overcome the influenco of an embedded context and view items as separate. It identifies a wholistic as opposed to partistic approach to problem solving.

This subject's articulation as analytical indicates an ability to break down complex tasks and identify component parts. "I saw a pattern once for little animals like that quilt . . . It was like a little dog and his ear on the top . . . and you can lift it up! and his tail too!" This ability to break things down into its component parts along with the skill of focusing on each part has minimum value when taken together with the rest of the profile because there are insufficient comparisons made and unorganized categories for storage.

Dimension - Tolerant/Intolerant

This dimension describes the individual's deferential willingness to accept perception at variance with his perceived knowledge, understanding or experience. It measures the extent to which an individual departs from a known given and accepts experiences he knows to be unreal. The Tolerant subject is open to novel or ambiguous experiences and information. The Intolerant subject will hold to current knowledge even faced with information which demonstrates clearly that the current knowledge in inaccurate.

This subject's articulation is at a midpoint between the two extremes with a tendency toward the tolerant end. Sometimes she is open to novel experiences but at other times she will not accept experiences at odds with her own perceptions. When discussing which way of thinking she uses more often, rational or pops out, she indicates - "one way is not better than the other" (tolerant). At the other extreme when discussing her patterns of living, she replies, ". . . we're in a routine you know, always the same thing every night . . . you don't know how to break out of it." This inconsistant behavior indicates little control over thought processes and leaves her open only to very directed experiences. Her existing knowledge base is not sufficiently organized to accept new perceptions as an habitual mode of thinking.

Dimension - Sharpening/Leveling

This dimension describes reliable individual variation is assimilation in memory. It measures the manner in which an individual organizes memory images and relates these images to present information. The Sharpening subject relies Heavily on visual memory and had the ability to use memorized data as an accurate criteria to judge new data. Subjects at the Leveling extreme tend to use rote memory and repetition and thus have difficulty associating new information and organizing old.

This subject's non-articulation indicates a tendency to lose sharp distinctions between items in memory. This behavior is demonstrated throughout her interview by such comments as. . . . if I don't say it right away--I forget all about it." "most of the time I do it right away because if I wait, usually I don't do it . . . it goes . . . I don't know why." She does not have the skill for effecient and effective assimilation into memory. This combined with unorganized categorization and partial analysis leads to a high variability in performance. After breaking things down into their component parts and focusing on one part, she is not able to sufficiently store that data for later retrieval.

Dimension - Complex/Simple

This dimension describes individual differences in the tendency of subjects to construe the world through multi-dimensional and discriminating perspectives as opposed to a uni-dimensional and simplistic perspective.

This subject's articulation is at a midpoint between the two extremes. She has available to her only a few of the criteria necessary to make comparisons of new data with old and to successfully integrate this new data into an existing data base. Her discussion about the "legs" she saw in the shop and how she made a divider out of it: "I saw those legs and I thought of making that with it . . . nobody else - I didn't see anybody else doing it." She was able to take the new data (legs),and compare it to what existed in her mind (hold things up, can stack them together), with a need and produce a divider. She took the image of the legs and fit it into all the categories she had in order to come up with a new one - divider (complex). At the opposite extreme - when asked what do you think had made you the way you are as far as your learning - she replied, "must be from my family . . . because my mother always make our clothes when we were small." This is a simplistic comparison of all data and experiences that might have contributed to her learning. This comparison was done on a uni-dimensional comparison of existing knowledge in her data base. This inconsistant cognitive behavior along with her entire profile, indicates a need for direction for proper identification and categorization of data for successful storage and recall.

Cognitive Profile Report

Subject: Mr. Rock

Prepared by: Susan Kuntz
Center for Cognitive Studies

Dimension - Reflective/Impulsive

This dimension marks a subject's individual consistency in the speed with which hypotheses are selected and information processed. Impulsive subjects tend to offer the first answer that occurs to them even though it is frequently incorrect. The Reflective subject will, on the other hand, take a sufficient amount of time to examine in detail all aspects of the presented problem, consider several alternative hypotheses, select one which satisfies all requirements and offer this as a response. The Reflective subject's first response is usually correct.

This subject's articulation is at a midpoint between the two extremes. As such, his cognitive behavior tends to be erratic. Although he makes comparisons before task completion, these comparisons may be incomplete. "And I may get a brainchild here at sometime and say 'well, this may be a good idea' and it really doesn't amount to anything at the time." His whole conversation about being psychic is one of inconsistent, erratic cognitive behavior - first giving into the psychic, then not believing it at all. Making incomplete comparisons of psychic situations could lead to inconsistent accuracy in the behavior he exerts when even trying to recall these experiences - "Well, I've had other experineces, but my mind doesn't recall them now."

Dimension - Focus/NonFocus

This dimension describes the extent and intensity of attention development to a given task. It measures the ability of a subject to attend to the specific elements of a task which are relevant to its identification and solution. The Focuser, when instructed as to the importance of a specific attribute, is capable of attending to that specific dimension and is capable of disregarding irrelevant attributes. This capability can be useful in providing the basis for a detailed, programmed instruction format. The NonFocusing subject cannot attend to the specific elements of a task and displays a high degree of distractability, often deploying attention to irrelevant aspects.

This subject's non articulation in this dimension indicates a lack of control over focusing strategies. He may be misled by irrelevant data. This is demonstrated in his example given to Bert of finding an answer to a question or problem. He begins to answer the question very nicely by focusing on wood stoves and a problem with an air vent, but is soon discussing engineers, patents and planning stages. He is easily distracted from the problem as presented and creates new answers for whatever he wants the problem to be. This lack of control over focusing strategies along with incomplete comparisons between each experience may lead to rambling thoughts only instead of associations which are easily stored and retrieved with clear intertwining connections.

Dimension - Narrow/Broad

This dimension marks a subject's consistent preference for the degree of inclusiveness in establishing the acceptable range for specified categories. The Narrow subject has very well defined and definitive criteria utilized in identification of both essential problems and hypotheses or responses offered. The Broad subject will tend to have unorganized and vague criteria by which to classify and categorize given tasks.

This subject is midway between narrowly and broadly categorizing information. He may confuse categorization of information. His categories are not well enough defined for easy associations and recall. He tends to have many projects going, but "I think I have too many things going on at once to call it real orderly thinking." This inconsistent categorization,along with partial analysis and incomplete comparisons may lead to inaccurate identification, storage and recall of information.

Dimension - Analytical/Global

This dimension marks a tendency of a subject to either experience items as part of a background or to overcome the influence of an embedded context and view items as separate. It identifies a wholistic as opposed to a partistic approach to problem solving.

This subject is at the analytical end of the continuum. He is able to break down a whole and identify the component parts. His whole analysis of the problem with the wood stove is indicative of an analytical mode of thinking. But being able to identify the parts is overshadowed by the rest of his profile - not having sufficient focus of strategies or well defined criteria for inclusion in a category - "Well, I think I'm involved with so many different things that it's hard to separate them out. I guess I'm systematic, but disorderly."

Dimension - Tolerant/Intolerant

This dimenison describes the individual's deferential willingness to accept perception at variance with his perceived knowledge, understanding or experience. It measures the extent to which an individual departs from a known given and accepts experiences he knows to be unreal. The Tolerant subject is open to novel or ambiguous experiences and information. The Intolerant subject will hold to current knowledge even when faced with information which demonstrates clearly that the current knowledge is inaccurate.

This subject's articulation is at a midpoint between the two extremes. However, there is a tendency toward Tolerance. Sometimes he is open to new and novel experiences: "I am inclined to be psychic." Other times he shuts these experiences off: "And so, I'm constantly putting up a wall between me and the psychic because I don't want to be involved in it." This high variability in performance, along with inconsistent focusing and analysis strategies indicates minimum control over experiences and behavior. In his own words: his thinking develops as a result of a "need" - it is reactive and very directed.

Dimension - Sharpening/Leveling

This dimension describes reliable individual variation in assimilation in memory. It measures the manner in which an individual organizes memory images and relates these images to present information. The Sharpening subject relies heavily on visual memory and has the ability to use memorized data as an accurate criteria to judge new data. Subjects at the Leveling extreme tend to use rote memory and repetition and thus have difficulty associating new information and organizing old.

This subject is at a midpoint between the two extremes. As such, he tends to lose sharp distinctions in memory. He uses visual memory as pictures in his mind to remember information. Much of his memory is unorganized and a part of hapinstance - "I find that I have learned something in the interim that I didn't even realize I was learning." He does realize the necessity for organized recall, but the rest of his profile permits little conscious control over storage and retrieval - "I suppose it's like a computer - today's computer. You know, they keep putting information into them and you press the right button sometime in the future and the things come back the way - well, it's an accumulation of what they put in."

Dimension - Complex/Simple

This dimension describes individual differences in the tendency of subjects to construe the world through multi-dimensional and discriminating perspectives as opposed to a uni-dimensional and simplistic perspective.

This subject has a tendency toward the Complex end of the continuum. This is so prevalent throughout hiw excerpts. His interests are varied and multi-dimensional, "but I'm really more interested in the world around me, the way things are and how they happen and how they should be...I'm only suggesting that as one of the motivations...why I am..."

Cognitive Profile Report

Subject: Mrs. Field

Prepared by: Susan Kuntz
Center for Cognitive Studies

The Cognitive Profile provides for researchers an organizing principle by which to understand the dynamic interrelationship that exists among the various dimensions of cognition and their combined impact on specific behaviors. The Profile consists of seven bipolar dimensions which are: Reflective/Impulsive, Analytical/Global, Focus/Non-Focus, Narrow/Broad, Complex/Simple, Sharpening/Leveling and Tolerance/Intolerance. When these dimensions are combined the total profile is predictive and descriptive of 3 separate types of cognitive behavior. Type 1 profiles are descriptive of the necessary skills utilized by individuals for high levels of achievement. The type 2 profile skills are descriptive of those skills which are not sufficient to facilitate consistent, successful performance. The type 3 profile indicates a lack of basic skills and inferior performance.

This subject's profile is a type 2. The analysis of the seven dimensions begins to describe a pattern or profile of cognition which tends to leave the subject confused initially and even if instructed she will tend to be unorganized and inconsistent in her processing procedures.

This subject's profile of a type 2 indicates inconsistent academic behavior. She has a tendency to make incomplete comparisons between problems and is sometimes distracted by irrelevant data when trying to solve a problem - "Time to let my mind wander." This incomplete comparison and partial analysis of problems leads to a confused categorization of information. Consequently, the information does not get identified, analyzed or stored adequately, "Most things I put back in my mind and let dwindle away." This information has not been processed sufficiently to assimilate into an existing Cognitive Structure in order for meaningful learning to take place.

COGNITIVE PROFILE REPORT

SUBJECT: Mr. Ambrose
PREPARED BY: Susan Kuntz
Center for Cognitive Studies

DIMENSION: Reflective/Impulsive

This dimension marks a subject's individual consistency in the speed with which hypotheses are selceted and information processed. The reflective subject will: take a sufficient amount of time to examine in detail all aspects of the presented problem, consider several alternative hypotheses, select one which satisfies all requirements and offer this as a response. The Impulsive, unlike the Reflective, will make a decision relative to response based on partial and unorganized analysis of the task.

This subject's articulation indicates a tendency to react somewhere between these two extreme positions. As such, there is no actual conscious control exerted by the subject over this dimension. This is demonstrated in his own answers to questions about his own modes of thinking where he stated, "If it can be done right off, I'll do it right away, but a big project takes time to tumble around in the brain." "Something will come to me fast, but sometimes it's necessary to think about something." He sums up this dimension by describing himself as "quick tempered at times" and also questioning his "patience" working with kids, but at the other extreme, if a task seems difficult, "I try a little harder and think it over a little more." This erratic thought processing can lead to indecision relative to responses and hence inconsistent behavior.

DIMENSION: Focus/NonFocus

This dimension describes the extent and intensity of attention development to a given task. It measures the ability of a subject to attend to the specific elements of a tasks which are relevant to its identification and solution. The Focuser, when instructed as to the importance of a specific attribute, is capable of attending to that specific dimension and is capable of disregarding irrelevant attributes. This capability can be useful in providing the basis for a detailed, programmed instruction format. The NonFocusing subject cannot attend to the specific elements of a task and displays a high degree of distractability, often deploying attention to irrelevant aspects.

This subject's articulation is at the midpoint between the two extreme positions. This indicates a lack of consistent,appropriate focusing strategies and a tendency for distractability and only partial analysis of the task.

This inconsistent behavior is demonstrated generally by comparing answers to the modes of thinking questions and describe self to self question. In the Modes of Thinking Questions excerpts, when asked specific questions, he focused on the correct data and answered the question directly, e.g. the conversation about not stopping when something seems impossible (page 1, Modes of Thinking). In the other extreme, when asked to describe himself to himself, after admitting the complexity of the problem ("Boy, that's a good one!"), he had to be brought back to questions several times. His natural tendency was to focus on things he could describe easily, i.e. being President of the Union. He then went into a lengthy discussion of how the underprivileged can be helped by the Union. These aspects were more appealing to him than the self-description asked for, so he was describing these aspects as a solution to the question - "How would I describe myself to myself?" These two very different approaches to questions lead to confusion in task identification and partial analysis of situations themselves.

DIMENSION: Narrow/Broad

This dimension marks a subject's consistent preference for the degree of inclusiveness in establishing the acceptable range for specified categories. The Narrow subject has very well defined and definitive criteria utilized in identification of both essential problems and hypotheses or responses offered. The broad subject will tend to have unorganized and vague criteria by which to classify and categorize given tasks.

The subject is between these extremes in this dimension and hence lacks control over this dimension. As a result, there is a degree of confusion in information categorization. There are tendencies to demonstrate a lack of organization relating to learned information and a tendency to confuse this information, leading to inaccurate identification, storage and recall. Even if correct, this subject may not understand the reason for the evaluation, but is reassured to just get it sometimes. "Something will come to me fast when I've done something wrong. Something dawns on me." He never seems quite to understand how he found out about the correct answer, but seems content enough that he finally got it right. In his own description, "I don't know what kind of thinking that is, I just know it happens." This inconsistent tendency, along with inadequate focusing strategies, proves unproductive in tasks requiring distinctive discrimination abilities, not only in tasks requiring accurate reponses, but also in accurately identifying and classifying the essential task or problem.

DIMENSION: Analytical/Global

This dimension marks a tendency of a subject to either experience items as part of a background or to overcome the influence of an embedded context and view items as separate. It identifies a wholistic as opposed to a partistic approach to problem solving.

The subject's articulation is at the Global extreme. He tends to view the task as a whole as demonstrated in response to self-description -- "I'm just a human being," "I ain't much of anything," and his description of starting a "little corporation." The Global subject will work at the entire project first and if the whole problem is much too complex, leave it for awhile because it's too confusing. This is not to say that the Global person will not come back to a task, but initially it is too confusing to bother with. "Well, I have left things, I have left several things, it's... well, I'd say to myself it's impossible!" These inconsistent focusing and categorization strategies lead him to "throw it (answers) away" and come up with something later on. This tendency, together with inarticulated, narrow focusing and reflective strategies leads to confusion when confronted by complex problems.

DIMENSION: Tolerant/Intolerant

This dimension describes the individual's deferential willingness to accept perception at variance with his perceived knowledge, understanding or experience. It measures the extent to which an individual departs from a known given and accepts experiences he knows to be unreal. The Tolerant subject is open to novel or ambiguous experiences and information. The Intolerant subject will hold to current knowledge even when faced with information which demonstrates clearly that the current knowledge is inaccurate.

This subject's articulation is at a midpoint between the two extremes. Sometimes he is open to novel and new ways of performing, especially if it is in answer to a problem he could not figure out. "Hey, look, why didn't I think of that?" Yet other times he will not even bother, it seems useless to consider alternatives, "Wait, I'm doing well the way I'm handling this problem; why get into this?" This unarticulated behavior indicates little control over perceptual structure and leaves the person open only to directed experiences.

DIMENSION: Sharpening/Leveling

This dimension describes reliable individual variation in assimilation in memory. It measures the manner in which an individual organizes memory images and relates these images to present information. The Sharpening subject relies heavily on visual memory and has the ability to use memorized data as an accurate criteria to judge new data. Subjects at the Leveling extreme tend to use rote memory and repetition and thus have difficulty associating new information and organizing old.

This subject's non-articulation indicates a tendency to blur and lose sharp distinctions in memory. Although he utilizes the skill of visualizing information in the forms of pictures, he also uses repetition as a means of remembering. He stated that he keeps at things until they get done so that he won't forget. This, together with the other dimensions described in his profile, indicates that he may not realize important necessary associations and how to economically store these in memory.

DIMENSION: Complex/Simple

This dimension describes individual differences in the tendency of subjects to construe the world through multi-dimensional and discriminating perspectives as opposed to a uni-dimensional and simplistic perspective.

This subject's articulation as Complex indicates he has available in his cognitive structure many and varied distinct categories by which to categorize and associate new data. His continued tendency to think of new angles, and modify answers, in order to reach a solution, supports this articulation. His declaration, "There's got to be a better way to do it," is indicative of an individual operating in a complex manner. This high degree of category complexity together with inconsistent and global tendencies in the rest of his profile could lead to frustration in performance and never quite fitting all the pieces together. The categories are available, but the associations, for storage and recall, are weakened.

His total profile indicates the necessity for direction in learning new tasks and inconsistent patterns of identification, storage and recall.

Cognitive Profile Report

Subject: Mrs. Bell

Prepared by: Susan Kuntz
Center for Cognitive Studies

The Cognitive profile provides for researchers an organizing principle by which to understand the dynamic interrelationships that exist among the various dimensions of cognition and their combined impact on specific behaviors. The profile consists of seven bipolar dimensions which are: reflective/impulsive; analytical/global; focus/non-focus; narrow/broad; complex/simple; sharpening/leveling; and tolerance/intolerance. When these dimensions are combined, the total profile is predictive and descriptive of three separate types of cognitive behavior. Type 1 profiles are descriptive of the necessary skills utilized by individuals for high levels of achievement. The Type 2 profile skills are descriptive of those skills which are not sufficient to facilitate consistent, successful performance. The Type 3 profile indicates a lack of basic skills and inferior performance.

This subject's profile is a Type 2. The analysis of the seven dimensions begins to describe a pattern or profile of cognition which tends to leave the subject confused initially and even if instructed she will tend to be unorganized and inconsistent in her processing procedures.

This subject's profile indicates one of erratic cognitive behavior. The profile demonstrated vascillation in problem solving abilities. Sometimes she does a comparative analysis and can attend to the problem as presented, as demonstrated when she answered specific questions about places and times she does her thinking. Other times she demonstrates confusion in identifying the question and even creates a problem of her own, i.e. when asked how she tends to solve problems she discussed "noise" as the biggest problem she has; with little explanation of how she might solve the problem. She has created for herself the problem of "what" and not "how" and chosen to answer the question in this manner.

Her categorization demonstrates the need for direction for proper identification and recall. She tends to lose the sharp distinctions necessary for storage of information into well defined criteria. In her own words, she sometimes thinks "in spurts" and when she gets distracted, i.e. like from reading, and she doesn't quite understand, she will leave it.

Although she views herself as an analytical thinker, global tendencies are prevalant throughout her conversations. She has problems sorting out individual items and feels much more comfortable experiencing things as a whole. "If people would use the Bible principles, every man would love brother, no more V.D., no more broken homes...Bible gives the answers." Her reference to the Bible and Watertower as the places she goes for instruction in solving problems demonstrates how comfortable she feels when the answers are written for her.

Her profile indicates she has strategies for making incomplete analysis of data to store in memory and she may tend to lose sharp distinctions between items. Those items are constantly reinforced, i.e. a clean and orderly house is very indicative of the things she remembers.

CENTER FOR COGNITIVE STUDIES
DR. CHARLES A. LETTERI, DIRECTOR

SCHOOL:
DATE:
GRADE:

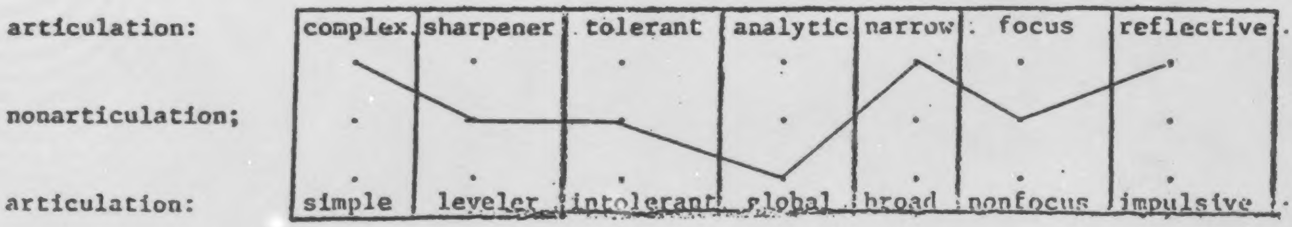
Code Number:
Name: G. Johnson

	RAW SCORE	ARTICULATION
C/S:	15	C
S/L:	LOA: 13.2 OA: 92.2	NA
AMB:	11.2/5 19/4 16/5	NA
EFT:	6	G
CW:	29	N
SCAN:	TE: 24.5 ELE: 11.5	NA
MFF:	T: 1506 E: 6	R

AGE:
SEX:
IQ:
MENTAL AGE:

VERBAL:
LANG:
MATH:
READING COMP:
WORK/STUDY SKILLS:
COMPOSITE:
CLASS STANDING:

COGNITIVE PROFILE



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SD:
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CENTER FOR COGNITIVE STUDIES
DR. CHARLES A. LETTERI, DIRECTOR

SCHOOL:
DATE:
GRADE:

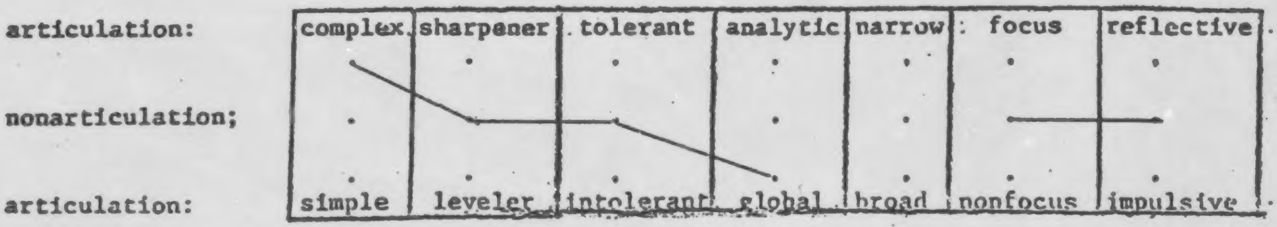
Code Number:
Name: R. Tetreault

	RAW SCORE	ARTICULATION
C/S:	13	C
S/L:	LOA: 46.2 OA: 85.1	NA
AMB:	7/8 8.6/7 15/5	NA
EFT:	6	G
CW:	N/V	
SCAN:	TE: 25.5 ELE: 12.5	NA
MFF:	T: 1368 E: 14	NA

AGE:
SEX:
IQ:
MENTAL AGE:

VERBAL:
LANG:
MATH:
READING COMP:
WORK/STUDY SKILLS:
COMPOSITE:
CLASS STANDING:

COGNITIVE PROFILE



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CENTER FOR COGNITIVE STUDIES
DR. CHARLES A. LETTERI, DIRECTOR

SCHOOL:
DATE:
GRADE:

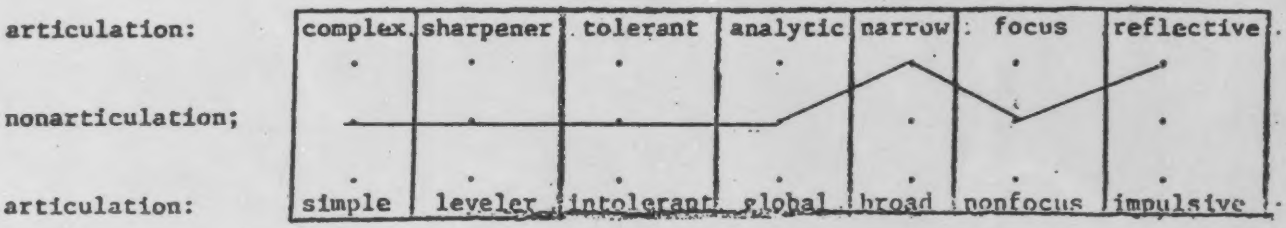
Code Number:
Name: M. Isabelle

	RAW SCORE	ARTICULATION
C/S:	12	NA
S/L:	LOA: 6.6 OA: 93.5	NA
AMB:	5.3/11 4.7/11 4.5/11	NA
EFT:	10	NA
CW:	31	N
SCAN:	TE: 30 ELE: 15	NA
MFF:	T: 1902 E: 6	R

AGE:
SEX:
IQ:
MENTAL AGE:

VERBAL:
LANG:
MATH:
READING COMP:
WORK/STUDY SKILLS:
COMPOSITE:
CLASS STANDING:

COGNITIVE PROFILE



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CENTER FOR COGNITIVE STUDIES
DR. CHARLES A. LETTERI, DIRECTOR

SCHOOL:
DATE:
GRADE:

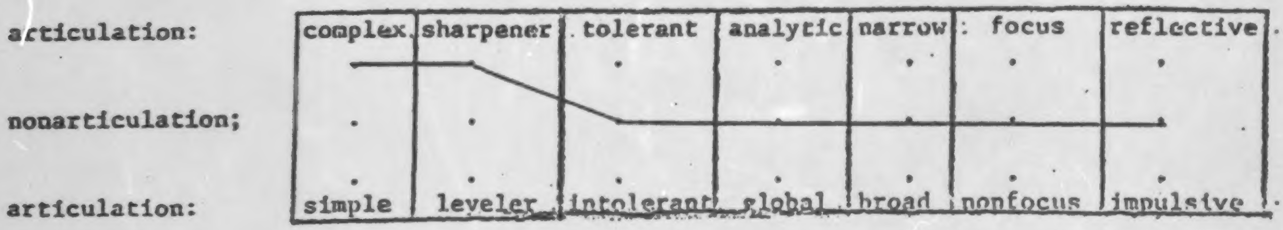
Code Number:
Name: K. Couture

	RAW SCORE	ARTICULATION
C/S:	14	C
S/L:	LOA: 0 OA: 100	S
AMB:	0/0; 2.2/8; 0/0	NA
EFT:	13	NA
CW:	59	NA
SCAN:	TE: 21.5 ELE: 12.5	NA
MFF:	T: 596 E: 9	NA

AGE:
SEX:
IQ:
MENTAL AGE:

VERBAL:
LANG:
MATH:
READING COMP:
WORK/STUDY SKILLS:
COMPOSITE:
CLASS STANDING:

COGNITIVE PROFILE



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CENTER FOR COGNITIVE STUDIES
DR. CHARLES A. LETTERI, DIRECTOR

SCHOOL:
DATE:
GRADE:

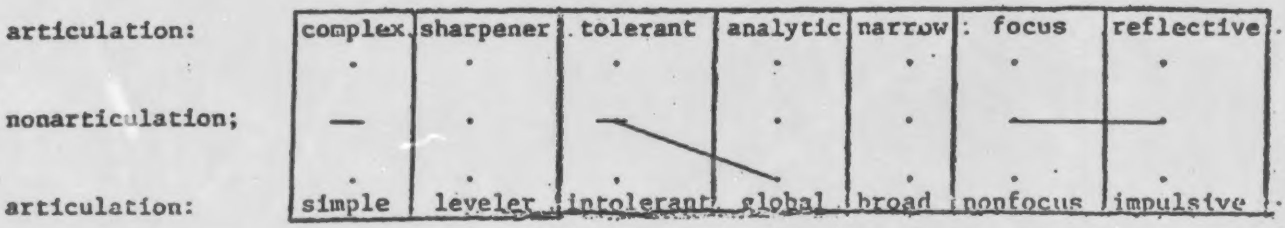
Code Number:
Name: H. Horn

	RAW SCORE	ARTICULATION
C/S:	10	NA
S/L:	LOA:	
AMB:	1.25/8 5.8/10 11.5/4	NA
EFT:	2	G
CW:	N/V	
SCAN:	TE: 32.5 ELE: 12	NA
MFF:	T: 764 E: 20	NA

AGE:
SEX:
IQ:
MENTAL AGE:

VERBAL:
LANG:
MATH:
READING COMP:
WORK/STUDY SKILLS:
COMPOSITE:
CLASS STANDING:

COGNITIVE PROFILE



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CENTER FOR COGNITIVE STUDIES
DR. CHARLES A. LETTERI, DIRECTOR

SCHOOL:
DATE:
GRADE:

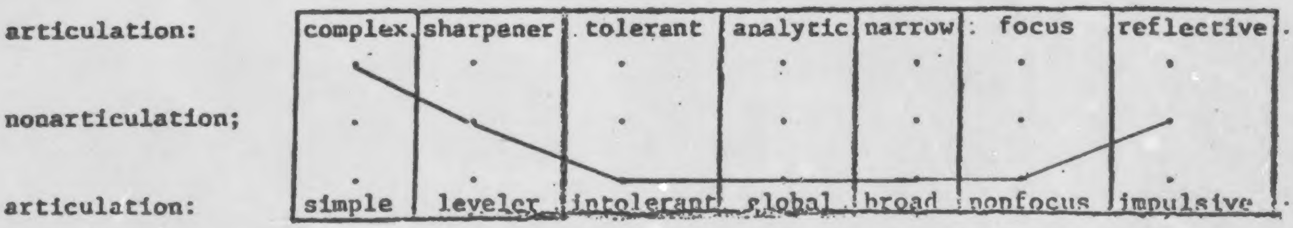
Code Number:
Name: B. Morse

	RAW SCORE	ARTICULATION
C/S:	14	C
S/L:	LOA: 19.8 OA: 93.5	NA
AMB:	0/0 0/0 3/2	I
EFT:	4	G
CW:	115	B
SCAN:	TE: 59 ELE: 30	NF
MFF:	T: 1016 E: 10	NA

AGE:
SEX:
IQ:
MENTAL AGE:

VERBAL:
LANG:
MATH:
READING COMP:
WORK/STUDY SKILLS:
COMPOSITE:
CLASS STANDING:

COGNITIVE PROFILE



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CENTER FOR COGNITIVE STUDIES
DR. CHARLES A. LETTERI, DIRECTOR

SCHOOL:
DATE:
GRADE:

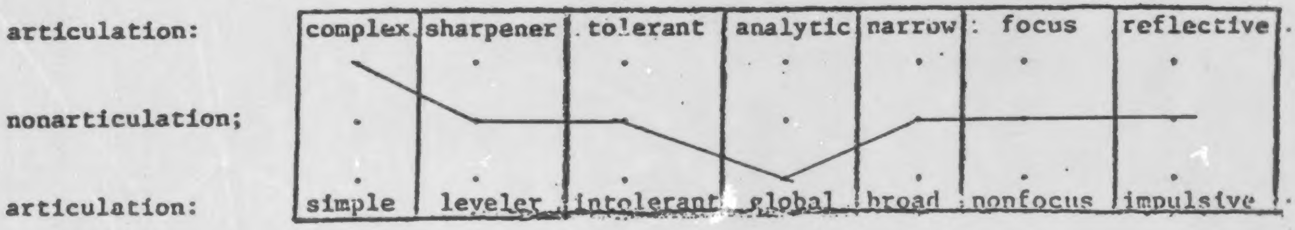
Code Number:
Name: S. Hill

	RAW SCORE	ARTICULATION
C/S:	14	C
S/L:	LOA: 6.6 OA: 94.8	NA
AMB:	2/2 10/9 5,4/10	NA
EFT:	3	G
CW:	62	NA
SCAN:	TE: 22 ELE: 9	NA
MFF:	T: 344 E: 17	NA

AGE:
SEX:
IQ:
MENTAL AGE:

VERBAL:
LANG:
MATH:
READING COMP:
WORK/STUDY SKILLS:
COMPOSITE:
CLASS STANDING:

COGNITIVE PROFILE



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CENTER FOR COGNITIVE STUDIES
DR. CHARLES A. LETTERI, DIRECTOR

SCHOOL:
DATE:
GRADE:

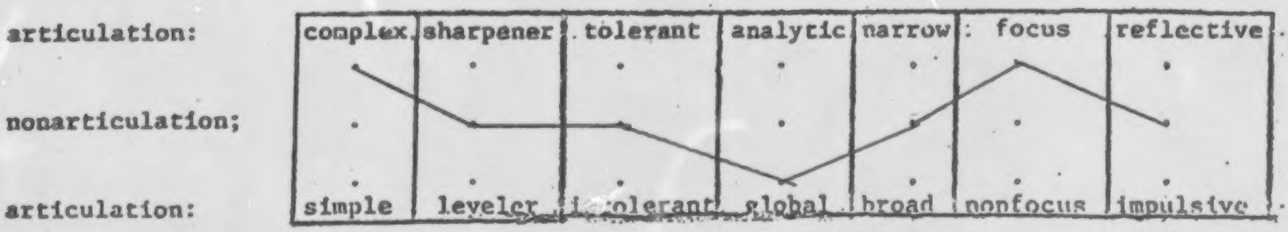
Code Number:
Name:
G. Miller

	RAW SCORE	ARTICULATION
C/S:	13	C
S/L:	LOA: 6.6 OA: 94.8	NA
AMB:	11.6/5 4.1/13 .5.5/4	NA
EFT:	7	G
CW:	70	NA
SCAN:	TE: 13.5 ELE: 7	F
MFF:	T: 858.08 E: *	NA

AGE:
SEX:
IQ:
MENTAL AGE:

VERBAL:
LANG:
MATH:
READING COMP:
WORK/STUDY SKILLS:
COMPOSITE:
CLASS STANDING:

COGNITIVE PROFILE



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CENTER FOR COGNITIVE STUDIES
DR. CHARLES A. LETTERI, DIRECTOR

SCHOOL:
DATE:
GRADE:

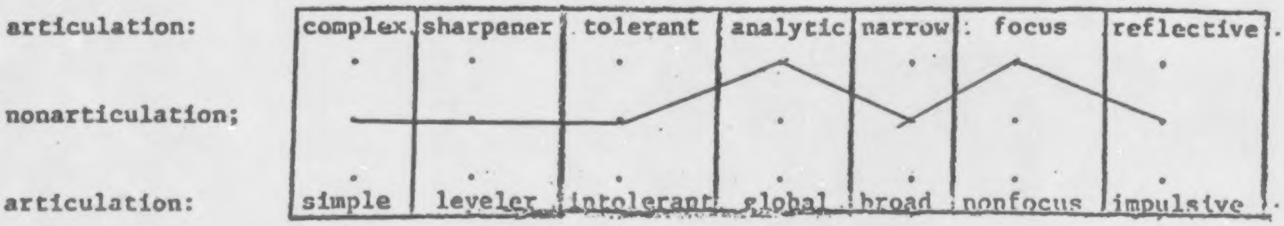
Code Number:
Name: G. Houle

	RAW SCORE	ARTICULATION
C/S:	11	NA
S/L:	LOA: 13.2 OA: 92.2	NA
AMB:	5.7/12 4.3/15 8.5/8	NA
EFT:	14	A
CW:	59	NA
SCAN:	TE: 10 ELE: 2.5	F
MFF:	T: 2066 E: 7	NA

AGE:
SEX:
IQ:
MENTAL AGE:

VERBAL:
LANG:
MATH:
READING COMP:
WORK/STUDY SKILLS:
COMPOSITE:
CLASS STANDING:

COGNITIVE PROFILE



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CENTER FOR COGNITIVE STUDIES
DR. CHARLES A. LETTERI, DIRECTOR

SCHOOL:
DATE:
GRADE:

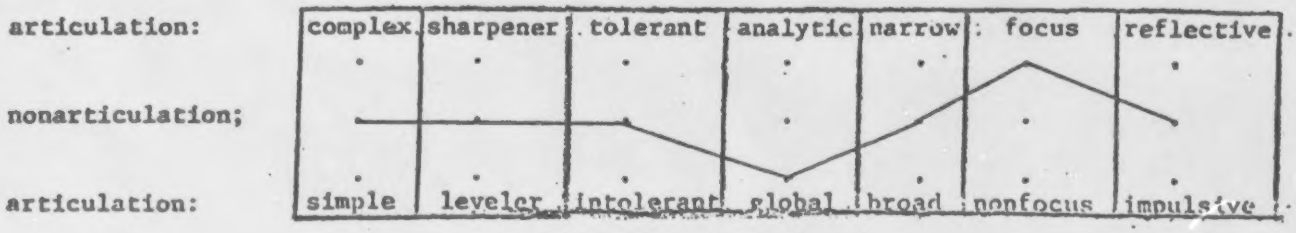
Code Number:
Name: R. Boisvert

	RAW SCORE	ARTICULATION
C/S:	10	NA
S/L:	LOA: 6.6 OA: 94.8	NA
AMB:	4/15 3.4/14 7.25/8	NA
EFT:	5	G
CW:	75	NA
SCAN:	TE: 13 ELE: 6.5	F
MFF:	T: 1144 E: 16	NA

AGE:
SEX:
IQ:
MENTAL AGE:

VERBAL:
LANG:
MATH:
READING COMP:
WORK/STUDY SKILLS:
COMPOSITE:
CLASS STANDING:

COGNITIVE PROFILE



mean:
SD:
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Means and Standard Deviation for
Group Only: Adult Learning Project

Complex/Simple

sd. 3.56
x 11.23

Leveling/Sharpening

LOA sd. 18.12
x 15.95

OA sd. 4.4
x 92.58

Ambiguity

F	sd.	4.239	L	sd.	5.46
	x	4.84		x	6.86
V	sd.	5.08	R	sd.	4.735
	x	6.15		x	9.38

Analytical/Global

sd. 4.548
x 6.769

Narrow/Broad

sd. 23.70
x 58.36

Focus/NonFocus

TE	sd.	17.95	ELE	sd.	9.247
	x	30.07		x	14.29

Reflective/Impulsive

T. sd. 564.875
x 1066.38

E. sd. 5.946
x 13.23

Mean and Standard Deviations for Sub-Scores on Seven Dimensions of the Cognitive Profile used for Articulations of of Adult Subjects

Dimension	Measurement	N	M	sd	1/2sd
Complex/Simple	RCRT	52	9.23	3.147	1.57
Sharpener/Leveler	Square Lag				
	LOA	53	14.9	8.3	4.15
	OA	53	88.96	7.89	3.94
Tolerant/Intolerant	Optical Illusions				
	Face	52	15.12	14.84	7.42
	#	52	5.4	4.76	2.38
	Left	52	19.97	12.07	6.03
	#	52	6.59	4.26	2.13
	Up	52	17.92	14.27	7.13
	#	52	5.4	2.87	2.45
Analytical/Global	GEFT	54	10.87	3.297	1.648
Narrow Broad	CW Scale	54	66.94	18.57	9.28
Focus/Non Focus	Disk				
	TE	48	26.27	10.77	5.38
	ELE	48	13.11	5.06	2.53
Reflective/Impulsive	MFF (Adult)				
	Time	54	352.89	282.84	141.42
	Error	54	9.65	3.10	1.55

APPENDIX F

Monograph Prospectus Papers from Co-Interpreters

"There is no use attempting to help those who will not help themselves." (Confucius)

Self-Planned Learning: Policy and Research Needs
Roger Hiemstra
Syracuse University
Syracuse, New York
February 9, 1981

Introduction

A conclusion is offered based on the current study's data and the several related studies that have proceeded it: much more attention must be given by society, by educators, and by policy makers to the self-planned adult learning phenomenon. Indeed, it appears that many educators are becoming increasingly interested in the self-directed learner in terms of developing appropriate learning experiences. Legislators, too, are beginning to pay more heed to requests by adults for support in meeting learning needs. However, it would appear that far too many educators seem to be embracing this "new" learner as a clientele base of dollars waiting to be spent on learning. Sohe legislators also see paying attention to "adult" voices as a means for garnering future votes.

Unfortunately, there have not been many reports in the literature of efforts to think through the implications, policy needs, research requirements, and programming changes related to the self-directed learner. This current study sheds considerable light on both the lifelong learning activity of many adults and their use of varied approaches or resources in such learning. Obviously, there is much that remains to be known, not the least of which is the role educators and educational institutions should play in facilitating adult learning. "Nothing extinguishes the soul like too much help" (Frank Crane). Therefore, the purpose of my writing contribution will be to raise some important (in my view) questions stimulated from my own research in this area, existing literature, and my involvement with the project.

For example, and perhaps most important, what are the rights of the learner and the related responsibilities of the educator? Should the educator intervene in self-directed learning activities? If so, when, how often, how much, and what should be the nature of the intervention? Can a "Mrs. French" be helped to make a decision about learning English earlier that she did or does she need to work it through for herself? Should the "Mr. Ambroses" and others who experience major medical problems be helped to better use such periods in terms of personal change or learning if we, in fact, suspect such periods to be highly "teachable" or reflective periods? Perhaps adult learners need to be protected by a code of ethics!

Another potential need has to do with the creation of more and better resources for learning. High quality learning guides, expanded uses of libraries or other learning resources, inexpensive help in the form of developed networks or learning exchange systems, improved self-study packets, facilitating the development of lifelong learning skills, and greater mobilizing of entire communities for learning are some of the possibilities.

A final implication to be discussed in this brief prospectus deals with the differences in learning style or preferences that are apparent from reading the case studies. Facilitating, helping, listening, locating resources, coordinating, and developing specific aids may be much more appropriate for teachers than "teaching" skills. Subsequently, the future training of educators who will work or are working with adult learners must deal with the various self-directed and adult learning concepts being uncovered through this whole area of inquiry.

Policy Implications

I propose that a major section of my writing contribution deal with some of the many policy implications stemming from both this current research effort and the related literature base. A separate but related paper is the Occasional Paper No. 1, Policy Recommendations Related to Self-Directed Adult Learning, developed from a workshop I conducted this past summer. Each participant at the Rock Point retreat should have a copy.

One of the results of that workshop was the decision to create policy around three categories:

Adults as Learners -- the student perspective
Adult Educators -- the teacher/facilitator/researcher perspective
Adult Education Agencies -- the institutional/organizational perspective.

I would propose this as a viable categorization scheme for describing both policy and research needs.

Thus, I hope that the various policy statements described in the occasional paper can be evaluated in terms of their appropriateness to the current study. I also would plan to interact with the data, with my knowledge of the literature, and with the information generated during the retreat to derive policy ideas on such areas as:

- the various mental strategies apparently used by adult learners;
- problems and barriers faced;
- the role of the total family;
- institutional response requirements;
- the role and responsibility of the professional.

Therefore, I deem it important to receive feedback from each retreat participant in light of their specific field of expertise.

Research Needs

There are numerous research questions that popped into my mind while reading the case study material. Many of those connected with this project also have generated related research ideas. Thus, I would propose to include some research questions needing attention in the future.

I further propose a framework for organizing such research questions based on both the policy categories and some format ideas used by the College Board's "Future Directions for a Learning Society" project of a few years ago. Table 1 displays the framework I have in mind.

Table 1. Framework for Organizing Research on Self-Directed Adult Learning

	Adult as Learner	Adult Educators/ Researchers	Adult Education Agencies
Descriptive	D-L	D-E	D-A
Purposes	P-L	P-E	P-A
Content	C-L	C-E	C-A
Methods	M-L	M-E	M-A
Resources	R-L	R-E	R-A
Support	S-L	S-E	S-A
Outcomes	O-L	O-E	O-A

Adult as Learner. Research about the adult as self-directed learner.

Adult Educators/Researchers. Research about the adult educator as a facilitator of self-directed learning or about special research that needs to be undertaken by the adult education researcher.

Adult Education Agencies. Research regarding the role of the adult or non-traditional educational agencies in terms of self-directed learning.

Descriptive Research. Research that will build a basic understanding or provide knowledge benchmarks.

Research on Purposes. An examination of the aims toward which self-directed learning is directed.

Research on Content. The substantive content that needs to be studied and/or applied.

Research on Methods. An examination of the structures and processes through which self-directed learning opportunities are provided or facilitated.

Research about Resources. Understanding the various resources available, utilized, or possible for self-directed learning.

Research on Support. Knowledge about those activities that enable the provision of learning to take place.

Research about Outcomes. Examining the results of self-directed learning.

Some of the obvious research questions that have emerged, such as male/female differences, the different ways people approach learning, and the importance of personal goal setting, can be described in terms of various questions falling within the framework comparisons. Again, feedback about this approach and ideas on research needs will be needed during the retreat.

Implications

I foresee, then, the need for a concluding section that will describe resource needs, implications for future NIE directions, and conclusions. I'm currently teaching another workshop on self-directed adult learning and anticipate that considerable input will be possible from that experience.

Outline

I would propose the following as an outline for my writing contribution:

- I. Introduction
  - A. Brief overview of existing literature on self-directed adult learning.
  - B. Needs and requirements pertaining to improving the adult learning environment.
  - C. Overview/purpose of the pages.
- II. Policy Implications
  - A. Description of the three categories.
  - B. Presentation of policy statements.
  - C. Ideas related to implementing policy.
  - D. Summary.
- III. Research Needs
  - A. Description of the organizational framework.
  - B. Presentation of the research questions.
  - C. Summary.
- IV. Implications
  - A. Overview/introduction.
  - B. Educational training needs.
    - 1. Of educators
    - 2. Of learners
  - C. Educational resource development needs.
  - D. Concluding summary.

"We are haunted by an ideal life, and it is because we have within us the beginning and the possibility of it."
(Phillips Brooks)

Preparation for the Development of a Grounded Theory of Adult Learning: A Learner's Perspective

Connie Leean

Using Glaser and Strauss' notion of "Grounded Theory," I would like to write a monograph chapter on adult learning theory by taking the perspective of a rural, little-educated self-directed adult learner. That is, I would attempt to be the voice of one of our co-researchers, using a composite characterization of the 14 people we talked to. In fact, to make such a piece more graphic and perhaps more dynamic and realistic, I will play two roles - that of interviewer (with theoretical questions and jargon in hand) and that of respondent (down-to-earth, no-nonsense, "worker/philosopher").

My intentions for attempting such a task are three-fold. First, I want to extract from the adult learner's layman language the theoretical implications that relate to how adults learn. Second, I want to dig underneath this language for subtleties of meaning that could enlighten our theory-building. A third reason is to explore the medium itself - e.g., internal dialogue - and how it may be useful for defining what are the important questions to be asked about adult learning theory.

Overall, I would hope this would be good reading and spark a few new twists on the nature of theory building.

An Example:

Q. You said in our last session that you learned best by doing - by being actively involved in something. But isn't that just a given - a statement about life - about the way we live our lives?

A. Yes.

Q. OK. Then, you didn't mean "learning," per se?

A. Yes, I meant learnin'. That's what I said, didn't I?

Q. Ah - yes - but ...

A. You're wonderin' why I think of learnin' and livin' together?

Q. Yeah. Exactly. Why?

A. Because they're the same. Equal. Like I said, "If you're not learnin', you're dead!"

Q. Oh. You meant that literally.

A. Of course!

Q. So - to you, a learning theory must deal with the realities of living - be really life-centered.

A. Are you sayin' that it isn't now?

Q. Ah - well, some would say it isn't, I guess. Maybe one of the problems with this concept of learning is living is that it's too simplistic on one hand and at the same time, too general and complex. Does that make any sense to you?

A. Sort of a paradox?

Q. Hmmm.. Something like that, perhaps...

A. You know, I had a thought out there on the tractor the other day - like, I told you - that's where I do my thinkin' - almost a meditation, so to speak...

Q. Yes? What happened?

A. Well, it's like this. I was tossin' around in my mind about why livin' and learnin' go hand in hand. And then somethin' pops into my mind. Somethin' said, "Hey stupid! They don't always, you know." And I says back to myself, "Why not? When don't they go hand in hand?" And this other voice - well, my unconscious or something - spits it right out, "When a person isn't really livin', that's when!" So, you know what I learned from that little tractor ride?

Q. Tell me, please.

A. I learned that folks who's got a reason for livin' - you know, somethin' they're aimin' for - somethin' that keeps them goin' when times are tough - are the ones who are learnin'!

Q. Yes? And what about the others?

A. Oh them - they just vegetatin' - Goin' through the motions, but not really alive.

Q. Hmm. That's quite interesting. So you would tell the educational theorists that an important component in developing an adult learning theory is a meaningful life? Something like that?

A. Don't know what "component" means - but I think I get the drift of what you're askin'. Yup, to me there's no reason to be learnin' if there's no reason to be livin'. Do you catch my meanin'?

Q. Yes - I believe I do. Thanks.

Submitted by: Charles A. Letteri
Susan W. Kuntz

NIE Adult Learning Project
Cognitive Profile Monograph Prospectus

Category: Examining Self-Planned Learning and Personal Thinking Styles

Interview Protocol: Cognitive Profile

Guiding Questions:

1. Cognitive Profile for each subject - see attached profile sheets.
2. Cognitive Profile comparison to personal modes of thinking - see attached case reviews and analysis.

Summary and Implications: See attached statement.

Summary Statement

Profile of the 16 case studies follow precisely the distribution curve in terms of the number of individuals falling into each of the three profile types for each group tested. Regardless of age approximately 10% are found in type 1 and type 3 categories and 80% within the type 2 profile. Based on this distribution and the relationship which does exist between profile types and areas such as academic performance, occupational success and satisfaction we would find no difference should exist between this specific rural adult population and a cross-section of any other adult population. In other words, given opportunity for academic experiences for example, these rural adults would perform as well as any other group of students in terms of achievement. There are, however, several factors which must be taken into consideration for an adult population in general and a rural population in particular. Among these factors any assumption that adults are not capable of profiting from and succeeding in formal educational settings is fallacious, except for that approximately 10% of the population whose cognitive profiles midigate against academic achievement. Therefore, this specific sample of adults could be expected to achieve the normal range of success expected of any population in formal educational settings. Given this statement, any assumption that the content, level of sophistication, or mode of presentation for any educational project must be at a reduced level for adults in general or this population in particular is likewise fallacious. A third factor having direct implications for the first two is the assumption that this specific population of adults or any other population of learners can be introduced to new or different information without first taking into consideration the individual learner's cognitive structure. By cognitive structure I am referring to a stable, hierarchically organized, body of prior knowledge that is substantively relatable to the new information and can serve as the anchoring ideas for the proper assimilation of the new information. This factor is not a limitation on what can be taught, but rather an element of instructional design which must be attended to in order to facilitate learning for this or any other population of students. A fourth factor is related to the delivery system of any educational experience for a rural adult population. Regardless of the content or the mode of presentation or the level of sophistication, the information must be brought to these students in their local communities and at times which do not severely disrupt their normal day activities.

If the above factors are attended to in the design and implementation of learning experiences, be they sewing or physics, we can expect the rural adults in this sample to perform and profit from these experiences within the normal range of expectations for a similar population regardless of age or formality of experience.

Compelling evidence indicates that different types of learners profit from different instructional techniques. Cronbach and Snow (8), in their comprehensive review of the last two decades of instructional research, concluded that individual differences of learners were so important that "the substantive problem before us is to learn which characteristics of the person interact dependably with which features of instructional methods" (p. 493).

The ability to make such determinations is particularly important when the client is an adult learner. As Knox (12) points out, individual differences within age cohorts increase as members of the cohort grow older, due, among other things, to differing life experiences. Further, the number of adult learners is increasing at a faster rate than the population. The number of adults who score extremely high or low on measures of, for example, ability, motivation, and self-efficacy is increasing at a rapid rate. In short, there are more adults today than ever before; they differ from one another greatly; and these differences have significant instructional design implications.

At the same time that the proportion and diversity of adult learners is increasing, there is a growing demand for learning opporunities delivered through "distance learning" approaches -- mass media technologies such as television, radio, newspapers, or correspondence materials. In all sectors of education and training - the military, business and industry, universities, community colleges, professional education -- educational program planners seek to locate or develop packages of training materials they can adapt to their setting. Distance learning approaches tend to enjoy a lower per-student cost than classroom or community-based programs, and adult learners appreciate the flexibility of instructing themselves at a time and place convenient to their schedule. Policy makers are increasingly interested in funding such approaches (Lifelong Learning and Public Policy, 13), both for their cost benefits and their wide dispersibility. Demand for distance learning materials, then, is increasing on the part of program planners, adult learners, and policy makers (Richardson, 14).

This situation has the potential to become a serious problem for adult educators. In the typical face-to-face classroom situation, the individual differences of adult learners present few problems to the adult educator, for most are experienced at modifying instructional presentations to fit the special needs and interests of individual students. But with distance learning materials, there is little opporunity to tailor an instructional sequence to the special demands of individual adult learners. Efficiency and cost-effectiveness dictate mass production and mass delivery. Thus, as the need to shape the instructional message to the unique characteristics of adult learners increases, our capacity to do so seemingly is decreasing.

This article will present an approach to tailoring or adapting instruction for different learners in the distance learning setting. It begins with the assumption that distance learning will play an increasing role in adult education and that some way must be found to incorporate new knowledge about individual differences in learning into instruction presented via mass media. An attempt will be made in this paper to consider the realities and constraints facing the distance learning specialist and to incorporate reasonable generalizations from current research on instructional methods and adult aptitudes. The discussion will be presented in four parts: 1. Two different kinds of adult learners will be described; 2. Instructional methods which work for one type of learner but seem to fail with others will be characterized; 3. A curious antagonism between learning and enjoyment of instruction will be described; and 4. A specific instructional method will be suggested for distance learning programs which may maximize the learning and enjoyment of all adults.

RURAL ADULT'S USE OF STATES OF CONSCIOUSNESS IN SELF DIRECTED LEARNING

Thomas B. Roberts
Northern Illinois University

Mr. Ambrose: ... he spent time visualizing it and then set about to construct his mental model...he described his thinking process as "dreaming" about the way it would look ... "almost like meditation." Also, he thinks a lot before falling asleep, and sometimes wakes up with an idea "before the night's over."

Mrs. French finds herself thinking when she's alone washing the dishes or sewing. Overall, Mrs. French feels she thinks in a "step-by-step" fashion and favors this approach to the other "faster" way of thinking because in the step-by-step, "You're sure of it (the answer)."

Mr. Aube: When asked if he used any other approach such as intuition or dreams, Mr. Aube flatly responded by saying, "NO! That's the 'hare-brained' method and it ain't no good."

These three items cover the range of responses about modes of thinking. The first, Mr. Ambrose uses a multiple style consisting of several states of consciousness. Mrs. French uses both rational and other modes, but feels more secure with linear reason. Mr. Aube will have none of such nonsense. What do these differences indicate about the relationships between learning in adults and the use of states of consciousness?

First, the range is wide from denial to the mention of several sorts of overall mental patterns (states of consciousness). These patterns include Mrs. Field's, who lets her mind "wander," Mr. Ambrose who uses visualization, Mr. Bolduc, who likes "to see it (through) before I can do anything," Mrs. Desautel, who favors rational "word-type" thinking.

Second, several of the adults use one or more modes of thinking, Mr. Ambrose, for example. They seem to use these best in conjunction with eachother. Mrs. LaCroix, for example, uses linear thinking as her major mode of thinking, but also seems to daydream, fantasize, and think while she is working, "especially at tasks where she doesn't have to think about what she's doing." This gives a clue to another characteristic, the use of several states of consciousness (SOC's).

Third, the fact that Mrs. LaCroix uses fantasy and daydreams when her mind is at rest doing a repetitive task indicates that she is likely to be in a different SOC when she does so. A standard way for people to use this mode is to think about a task or problem and to then switch to a simple repetitive task. This is similar to the type of meditation in which one uses a mantra (word or phrase) or mudra (position or posture) or yantra (visual device) to "occupy" one's mind in meditation, allowing other thoughts to emerge encouraging other patterns of mental functioning. Mrs. Moss uses a similar technique: She often finds weeding or housework to be a "beautiful time for thinking," and is aware that her mind seems to be always working.

Fourth, the state of relaxed free-floating thought-reverie, is a common state for insight. Scientific insights and mathematical problems are typically solved in this state. Wallis' four-part model of creative problem solving calls this the incubation and illumination phases: (1) preparation, (2) incubation, (3) illumination, (4) verification. Mrs. LaCroix finds herself thinking just before falling asleep and sometimes upon awakening; these stages are the hypnogogic and hypnopompic states and are strongly associated with insights and problem-solving in the anecdotal literature. Mrs. Moss's ideas often occur at night "especially when she can't sleep or 'something's coming up'." These two women indicate a conscious, intentional, use of this relaxed pattern of working on problems, apparently in the incubation and illumination stages. Mr. Paquette has ideas "pop into his head," as does Mrs. LaCroix.

Fifth, control of states of consciousness varies. Mrs. Petit finds her thinking style varies from planning and apparently rational thinking in the morning to relaxed thinking in the afternoon, and finally at night. "I shut off my thinking cap." She seems unusually aware of the subjective aspects of thought as she describes the illumination phase "something comes through a passage and it passes through my head and keeps going." Carrie Simpson experiences insight intentionally, "You can use your hands and your mind doesn't stop," and unintentionally, spontaneously. She, like Ambrose, exhibits "tertiary process thinking," a style in which the person chooses to use a particular SOC. Perhaps Danny Keller's use of isolation and beer is a similar intentional process; although, it is hard to tell from his description.

Many creative people intentionally use different SOC's to see solutions to problems and/or to make associations and different patterns of the information they have at hand. Like many thinkers before them, these Northeast Kingdom adults have discovered ways to use their minds in addition to the classically rational pattern. But is there an association between rational cognitive functioning and irrational cognitive functioning?

Sixth, are the rational and irrational modes opposites, complements, or are they randomly associated? Arguments can be made both ways. As people learn to use their mental capacities, do they learn a greater variety of mental skills, including those found in different SOC's? Or, do they prefer to develop only one method at the expense of others? A clear indication of a trend does not appear from these data. Measuring cognitive development by averaging the cognitive profile scores of Letteri and Kuntz we can obtain an indication of the degree of the use of our usual awake state, in which reason and linear thought reside. Using the interviews we can look for instances of the use of other SOC's. How are they related? Figure 1 provides a rough plot of the relationship between average cognitive profile scores (vertical) and number of SOC's used as reported in the interview transcripts. While the relationship between the two may be positive, the low number of scores and wide distribution give no clear result. Table 1.

At least one can conclude that the association, if any, is not tight. It seems logical to suppose that skill in one mental state will eventually develop into skill in other states, but a more careful collection of data is necessary to reach any sort of firm conclusion. Additional research on the relationships between cognitive scores, as indicators of our ordinary state, and alternate modes of thought, as indicators of other states of consciousness, would open the door to a rich area of research; namely, the relations among SOC's and mental development. "Mental" in this case includes both the rational linear thinking of our awake state and other types of thinking in other states of consciousness.

If one assumes that the number and variety of skills one can learn depends on the number and variety of SOC's one can produce, then adult educators will want to investigate how to increase access to these states in order to help their students achieve full mental development.

Who Are The Undereducated?

Burt Sisco

I have for some time now been deeply concerned with an apparent irony in the findings of our research. This irony (perhaps more a paradox) concerns the language used to describe the population investigated: i.e., undereducated, little educated, minimally educated, etc. All of these descriptors are terribly perjorative and when measured against the findings of both the Tough replication and case study phase, cast serious questions of who really is educated and undereducated.

The term educated in recent years has been largely defined by the number of years of schooling an individual completed. The logic followed that the more years one completed, the more educated he/she was. Inherent in this definition, however, is the almost total neglect for the wealth of knowledge acquired through daily life in such settings as the home, work and community.

Research by Tough and others have helped to extend traditional notions of where learning takes place to settings beyond the formal classroom. The basic picture, according to Tough, is remarkably consistent from one population to another. The findings suggest that upwards of 90 percent of the adult population are engaged in at least one learning project per year, lasting 100 hours on the average. And, most of this learning occurs outside of school settings with the majority planned by the learner himself. I submit that a similar view would emerge if we examined what it means to be educated. I would like to write a monograph chapter devoted to such an explication.

Perhaps a useful way of visualizing what I am alluding to, is the proverbial tip of the iceberg analogy. Imagine, if you will, that the entire range of education is represented by the iceberg. For years, educators, politicians and community members alike have paid attention to the highly visible tip of the iceberg. Attention was focused primarily on formal schools or institutions of learning and the educated individual was measured in terms of how many years of schooling he/she acquired. At the same time, however, it turns out that only a small percentage of the total picture of what it means to be educated is represented by the visible portion of the iceberg. Below the surface, is a massive superstructure of settings where individuals acquire knowledge and grow as human beings. All of a sudden, rather than a narrow conception of the educated individual, an expanded view emerges. The knowledge gained throughout life (at home, work, church, community) is included and celebrated as the measure of what it means to be educated.

Clearly, from the case studies, we see 14 human beings at work seeking answers to their purpose and lot in life. Some appear more content than others, but there is a quality of reverence for new knowledge that may help solve an immediate or future problem. The cases portray full human beings, not empty or second-rate individuals as some policy makers would have us believe. There is evidence of teaching and learning. There is a degree of understanding about the environment and personal selves. Growth is apparent. We see systematic problem solving and a resourcefulness usually attributed to only the educated. Indeed, we see educated individuals,not indigent human beings, as popular myth would have it.

The cases provide a useful forum to raise such questions as Who are the educated and What does it mean to be educated? These, as well as questions of propriety, choice and ownership are important to explore. Perhaps we may rekindle (Oh Reagan would love this) the spirit of the past when self-reliance, independence, and self-made man (generically speaking) were celebrated values. At the very least, the discussion should make for interesting reading and bring to light new meaning surrounding the educated individual.

A FUNDAMENTAL ISOLATION

> "Another significant learning was ... learning to drive, something she thought she'd never do. 'I've had my license now about three years. I proved to myself I could.' Most recently, Mrs. Field has been reflecting quite a lot on her own growth. 'I can see the difference. I've learned I still have respect for the olders. I've learned to stand on my own feet.'"

It is not that Mrs. Field is unaware of the grain embargo or untouched by rising gasoline prices. She too has given up the agrarian dream and aspires to be a surgical nurse. She mentions the possibility of inventing a low salt cheese for older people. She is not removed from the political, economic and technological ideas of society. But she speaks almost not at all about those things most complicatingly institutional, the confrontation of political powers, the plight of the economy, the agricultural extension service. The one exception in the account is her interest in the care of the elderly. In that regard she is more the cosmopolitan.

Connie Leean's case studies tell of fourteen adults of the "Northeast Kingdom," that rural corner of Vermont bounded by Lake Champlain and Quebec. Alburg, the village furthest in the corner, is but 220 miles from Boston, and mountain-bound Montgomery less than 70 cross-country miles from Montreal. Yet the remoteness of these people is great. Perhaps another Mrs. Field lives near the Haymarket in Boston, or a Mr. Bolduc near the Old Customs House in Montreal, each as isolated as their cousins in "the Kingdom." The revelation is not necessarily that rural is different, but that the complexities of ordinary life fit poorly into the hardware and conceptualization of most adult education programmers.

The programmers--those who would harness the energies of a people to protect us from our enemies or to conquer new frontiers or even to sooth our irritations—invent agencies and handbocks, and from St. Albans and Burlington send cars with emblems on the doors. The state allocates a portion of its revenues to provide instruction for adults in matters practical, general, and avocational. If we had before us a list of continuing education services generated in Washington and Montpelier we might comb the case studies for the specifics of engagement with the needs of these citizens. It is not necessary. The reader already knows that Mrs. Field is touched almost every waking hour. It is some lack of compatability, a fundamental isolation perhaps, that appears as we read the case studies.

The case studies tell of Mr. Bolduc, enrolled in ABE writing and spelling classes locally, continuing finally an education interrupted by his father's death, the Korean War, a series of obligations to family and community. Through all these apparently he learned. He learned road-building from the town's road commissioner and some of the missed elementary studies from the commissioner's wife. A community sustained his learning. He learned, not because he needed to to serve the Democratic Party, the Grange or the Eastern Star, as he did, but because he needed--as we all do--to patch together his life. Ever bothered by kidney disease and inadequate education, he shaped his life to fit the hours and miles of daily work. The society served him, not by lifting him out of his world, but by allowing occasional and precious opportunity to better it.

Mr. Aube, the 38 year old French Canadian, lived alone, spoke reluctantly of being a "hellion" in school, a wife-abuser at home; yearning for the skill to be a better woodcarver and the power to write his children. Locally, Adult Basic Education was slowly empowering him, and television somehow helped him, to think through certain problems. They neither restored a lost vitality nor delivered him from encumbrances of the past, but in all their grey passivity, they enabled him to exult, "I don't have to depend on anybody reading a letter for me anymore."

The isolation is fundamental--as I see it. It is not a matter of distance, nor poverty, nor lack of education, but fundamental in that the conceptualizations of those who design adult education are often so at odds with the actuality of these lives. The help adults need, however great, is always incidental--the remedy prescribed in technical documents is regularly emancipatory. Mrs. Field needed a broshure, but the Clearinghouse needed to tally a user. Mr. Aube wants to write better. The program director needs a GED score.

Those staffing the bureaucracies are neither cold-hearted nor uninformed. Not always, but regularly they care. Their emotions are not at fault. Their cognitive functions often are. They know the facts of disadvantagement, but they subsume those facts with an input-output model of redevelopment services, thinking not of the particular circumstances of Mr. Bolduc or Mr. Aube but of what is common to them and thousands of others.

The social worker from Orleans knows something of the anguish of the Bolducs when told because of his health they are not eligible to adopt a child. But the director of the family services program and the author of federal accountability regulations, far removed from farmstead and ghetto, beholden to an institutional rhetoric, increasingly see social problems in terms of quotas and credentials and indicators.

It is easy to think the formalism of the Law and accountants have usurped the humanistic meanings of the social and educational services, but the formalism of the social sciences appears every bit as much the usurper. These scholarly disciplines cling still to French Universalism and American Pragmatism, diminished little by German Humanism and the Counter Enlightenment. Adult educators are trained to speak of universal truth and objective evidence and explanatory functions. Central to their proposals for funding are statements implying universal forces determining things, even though particular circumstances surrounding each person appear to the observer to be more important. Their researchers seek these underlying forces, propose hypothetical relationships among the forces, and advise agency personnel to become familiar with these forces. The use of such formalism to improve the governance of adult education programs has yet to be verified, but such assumptions go largely unchallenged by scholar or school administrator.

Such notions are useful to the educational official who can call for whatever new action and even while calling out the best minds to plan and evaluate that action, can rest comfortably knowing that little will be done to oppose the action, at least not during the action, nor retrospectively either.

The constructs and performance indicators are a boon to the distant administrator who often does not have quite the appropriate background and far too little time to gain concurrent experience. The site of responsibility for educators has increasingly become more distant. What was once the responsibility of the immediate community, and certainly the family, has become the concern of the state. Mrs. Field is no longer expected to care for her failing grandmother. Mr. Aube looks to the state rather than to his daughter for help with his writing.

Now paid by federal funds, the regional coordinator is expected to follow the same checklist used in Tennessee and Illinois. In the name of equity, Mr. Aube is expected to use the same textbook as any other who left school at the age of ten. The Vermonters do not suffer their isolation, in many ways they cherish it, but they little know the extent to which well-meaning agency officials allow their services to be predicated on the indicators and models of the social sciences.

These case studies themselves reflect the ambivalence of the service professions. First are the recollection of life experiences largely in the words of the rural culture. And then the responses to the technical questions: "Now let's see if we can place these significant events of your life on a timeline." And "The other way (of problem solving) is not so systematic or step-by-step. But rather this may happen when you least expect it." (There may be ways in which these questions are biased, but they are reasonable questions to have asked.)

In many cases the respondents handled the questions well, repeating the technical jargon or using their own words. Mrs. Field said she would

> "have to get know-how, a lot of know-how. It takes a lot of experience, a lot of responsibility. I'd just pick up some more when the opportunity arrives--learn by watching."

But the reluctance of the respondents to shift to this mode is apparent. And a key realization for the reader occurs when it is apparent that the personal history statements are rich with meaning and redundancy (not necessarily therefore reliable) and obviously from a long-held pattern of personal belief. The responses to the more structured interview are less rooted, less informative, probably less reliable--as with the quotation in the previous paragraph, or with the following succession of comments by Mr. Aube about (1) what shapes the way one learns and (2) the rational step-by-step approach to problem solving:

> "I don't have the foggiest idea--just doing it, I guess--nothing in particular shapes my thinking or learning."
>
> "a time saver--because you think things out, it saves you from making foolish mistakes. I'm highstrung, and know if something aint thought through, I'll get frustrated and big mistakes will happen. So, in order to prevent this, I gotta think things through before acting too hastily."

Whether Mr. Aube distinguishes between what he does and what he ought to do, and whether he distinguishes between deliberation and rational thinking--we do not know. The redundancy or triangulation needed for good analysis is not apparent in the case study report. The conclusion can be too quickly drawn that Mr. Aube is a rational thinker and the adult course should be organized to take advantage of it.

It could be said that the difference between reliable and unreliable responses these three provided follows from whether facts or opinions were asked. That is an important question. It confounds the one raised through out this paper. Here our concern is on the difference in quality of knowledge obtained from questions of personal life experience and questions of thinking and learning styles. The quality of response is different. This difference can be taken as indication that the adult education R & D community is isolated from at least many of their own adult learners.

What the case studies do beautifully is to bring to light the complexity of life and learning for adults in rural Vermont.

> "Mr. Bolduc talked passionately of the beauty of birds, noting in detail the various color combinations of some types, and how different species go about their daily business. When he sees a new bird that he doesn't recognize, Mr. Bolduc consults a variety of sources for the answer ranging from his neighbor (who has similar interest) to authoritative books or magazines on the subject. If the answer is still not found, he sometimes consults with the local game warden for help."

Accounts like these may draw a more humanistic response from the adult education specialist--but the important thing is that they may help legitimate an ordinary view of what adult education is, a view more sophisticated than ideas we regularly find in technical and regulatory publications.

Jill Mattuck Tarule

Working Title: Growth Promoting Experiences as a Basis for Programs for Rural Adults

The study, of which this paper is a part, looks into the lives of fourteen rural adults, inviting understanding about what has shaped their experience, forged their perceptions of their world, of what matters, of what is important to do and not to do. In each of the fourteen stories, there are traces of the path of growth and development that each person experienced. The paper I would propose writing would attempt to address the following questions: what kinds of experiences do these fourteen people describe as being growth promoting, and how might we, as educators or policy-makers, think about what we do in a way that is both responsive to and respectful of these experiences, so that our attempts at intervention for rural adults will support and enhance their development.

Before turning to the experiences, I need to define what I mean by "growth promoting". To do so, I draw upon two strands of theory about adult development which respectively describes adult growth as a process of transition (Levinson, Gould, Sheehy Valliant) and a process of transformation (Loevinger, Kohlberg, Gilligan). In the former, an individual's life is described as a series of age-related phases, often characterized by particular activities (school, marriage, and career), and change is frequently promoted by particular "marker events." In the transformational descriptions of development, development is characterized by stages which mark a progression from simple to complex thinking, from undifferentiated to differentiated understanding, from power-oriented conceptions of morality to principled ones, from a limited sense of self to a deeper self understanding and self perception including a conception of 'psychology', and from a more magical conception of religious beliefs to a more reasoned spiritual life.

Reading the "stories" of these rural Vermonters' lives sensitizes one to the particular ways in which these people are making sense out of their experiences, and to some particular issues which seem to emerge as being important (figural) for them. Some of these issues seem to signal a major transition, e.g. a change in a particular phase as a new one begins, and some seem to suggest a transformation, e.g. a change in the way the individual views his or her life in which one's world view alters significantly and one's perspective is irreversibly different. Both kinds of change help us to understand what has promoted significant growth. What kinds of issues emerge, then, as being growth promoting?

Often, rural Vermonters share with us the way in which a particular life event has come to be a marker event in their lives. Death and illness appear frequently as the event which preceedsand precipitates a major re-evaluation of one's life. Mrs. Desautel tells us how the death of her first child shocked her, never realizing such an event might happen to her. And she describes a process of how this experience led her to take on a new kind of responsibility for herself and her future. The experience of such crises often prompts a confrontation with one's expectations and assumptions about one's life. It may also bring a sharp sense of isolation - separation from others. Both may lead toward a renewed perspective including different world views. As Mrs. Desautel puts it: (I learned) "not to live for something you expect is going to happen".

The fact in adult life of living in a community - particularly a small, rural one - often makes this the arena in which major growth experiences occur. Responsibility for others is a major factor which can prompt growth. Mr. Tetrault tells how much he learned from the union presidency. Both men and women talk about what they have learned from parenting. Mrs. LaCroix describes how watching her children grow has shaped her: "That must be the time that you grow the most. You know you have to - whem you're responsible for somebody else." The experience of being responsible for others may extend to the experience of more general responsibility. Mrs. Desautels feels her careful way of thinking began in high school when "I was given more opportunities for responsibility - so when I got the chance, I started being that way."

But the community and responsibility can be experienced as a limitation too. Many of these adults tell about the crucial role travel - getting away - has played in expanding their vision and helping them to see their own life differently. And for those for whom travel has not been an actuality, it often appears as a hope for the future.

In noting the issues which seem to emerge as being growth promoting, we need to point to a couple which seem, at least for now, to have been growth inhibiting. The first is anger. A number of the adults (five out of fourteen) speak about their terrible tempers and how their difficulties with controlling those impulses get them "into trouble". This introduces a caution about one's involvements and, often, a wariness of others: "I'm highstrung, and know if something ain't thought through, I'll get frustrated and big mistakes will happen" (Mr. Aube). Such concerns can inhibit taking any risks - trying anything new. Alternatively, to struggle with such concerns often prompts very significant growth as the individual begins to be concerned about controlling his or her anger so they can participate more freely in community.

A second "growth inhibitor" appears as people describe what they see as the differences between women's thought and men's thought. Listening carefully, we hear a whole way of approaching a problem described as 'not me', e.g. the other sex being thought to be better at that. As one disowns such skills, one makes an assumption about personal limitations.

Finally, the implications for policy of this analysis cannot be examined without noting that the conditions in which individuals live have profound effects, indeed, upon their abilities and opportunities to be concerned with anything other than survival. Service providers must be responsive to this, hopefully recognizing the strengths inherent in such concerns rather than bemoaning their presence as perceived intrusion on the route to self-actualization.

What, then, do we learn from looking at what inhibits and promotes growth about thinking through policy or interventions? Rural adults have a deeply etched system of their own meanings. By honoring how those are described and felt, they can become guidelines for program design. Responsibility plays a key role, as does the opportunity to be caring for others. Responsibility includes the opportunity to feel oneself as a viable member of an enterprise, one in which ownership is shared. The opportunity to see entirely different ways of living, such as provided by travel, brings new perspective. Integrating major crises, with an opportunity to talk with others about the meaning and effect of such events is also crucial. Often, the opportunity to resolve contradiction (what Piaget has called "optimal incongruity") helps to bring about the growth of a new perspective as the incongruity is resolved. Both anger and sex differences, help us to see that the chance to view oneself differently, to try out behaviors previously seen as either impossible or inappropriate might well break open opportunities for new perspectives. Each of these might well appear in the "good" curriculum, classroom, or institutional system. Summarizing, some of the features would be opportunities 1) for a sense of ownership of the system, 2) for consciousness raising kinds of experiences including the supportive aspects, 3) for a sense of community and responsibility within that, and 4) to experiment with different ways of thinking, being and doing.

The concluding question for policy becomes: How does any particular policy help to encourage such outcomes? And if it does not, how does it propose to support and enhance the development of the individuals it purports to be serving?

OCCUPATIONAL CHOICE MAKING
(Article Prospectus
and Draft)

By: Greg P. Voorheis*
2/12/81

My article will focus on the issues involved with making occupational choices. I will also explore the areas of literacy as they relate to working. I will discuss a few of the possible uses of the findings of the research and resulting implications and cautions associated with directly using any of the project's findings for client intervention. Further, I will cite question areas relating to occupational choice making that need to be probed further in subsequent studies.

The following, then, is an abbreviated version of my proposed article which addresses the areas related to occupational choice making and which are based on the case studies performed as part of the adult learning project.

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*Currently, I am the Program Planner for Vermont's Balance of State Prime Sponsor which plans and administers all CETA programs in Vermont. Formerly, as the Assistant to the Vice President of Academic Affairs at the University of Vermont, I co-authored the adult learning grant with Dr. Constance Leean. I have written, taught and researched in the areas of adult learning and high school-college relations as they relate to advanced high school students. Additionally, I have written and researched in the area of telecommunications co-location planning. My recent articles have appeared in The Educational Record, The Public Telecommunications Review, and various CETA publications.

Greg P. Voorhels
2/12/81

OCCUPATIONAL CHOICE MAKING

(a draft)

From a user's perspective in employment and training program planning, I am concerned with how we can best meet the needs of the potential learner/worker constituencies as well as those needs of available or soon-to-be-available employers. In light of this basic goal I am interested in what I call the "literacies of working" and in identifying necessary resources that can aid in an individual's functional competency attainment. Literacies of working refer to those knowledge areas that are prerequisite to obtaining and retaining full or part-time, unsubsidized employment. Learning how to identify and respond to motivation, acquiring dependable and reliable work habits, learning how to identify and access necessary resources, learning how to relate to people, learning personal skills assessment techniques, learning how to find a job, and learning job-specific skills comprise the basic knowledge areas that make up the literacies of working.

A few questions that come to mind after reviewing the case studies are the following. Why have the case study respondents changed jobs so frequently? What accounts for the various number of times each has changed occupations? Have their educational backgrounds had any bearing on what types of positions they have held? How have their life experiences and situations affected their job changing decisions? Do the men change jobs more frequently than the women respondents? Are there any noticeable differences in job selection between the male and female respondents? Are the women more likely to leave occupations because they have had to move due to their husband's occupational changes? How much of their job changing was really their choice? Were not many of them reacting to their personal and geographic circumstances? It would appear that almost all the respondents had made deliberate choices in their lives that eventuated in major circumstancial changes. But how many of these "deliberate choices" were made because other options were either unknown or unavailable?

All of the respondents now live in the Northeast Kingdom. Only five out of 14 case study participants have 12 or more years of education. Several are either housewives, unemployed or retired. The unemployment rate in the Northeast Kingdom has, over the past 12 months, been over 4% higher than the state's highest average and almost 2% higher than the state's lowest average unemployment rate. Per capita income in the area has not kept pace with the state's increase. Although it has increased, it has not increased at the same rate as the rest of the state. What, then are the employment choices of people in this area and how has this lack of choice impacted on their self-directed learning?

A word needs to be said about the lack of certain types of data that we may want to explore further, In terms of the questions asked the case study respondents, we really don't know all the reasons that prompted them to change jobs. We know many of them changed jobs several times but we don't know all that went into their decision making. We do know that crafts and hobbies were highest on the list of self-directed learning projects. Further, we know that several of the respondents were or are involved with craft-related occupations. This area should be probed more extensively. In terms of statewide data on cottage industries we know very little. No comprehensive data exist on the numbers of or types of cottage industries that are in the state let alone the Northeast Kingdom. This data area needs to be covered more thoroughly especially in light of the current DOL/home knitters dispute in southern Vermont and its eventual effect on cottage industries.

Let's take a closer look at three case study respondents and examine not only the number and types of job changes they've made over the years but why they made the choices they did. Additionally, let's explore their perceptions of learning, their goals in life and the obstacles they faced.

Mrs. Moss

Mrs. Moss is now 60 years old. She has at least 12 years of education and is not enrolled in Adult Basic Education. During high school and immediately after, she explored several occupational areas. Odd jobs during high school provided her with spending money. Becoming a governess after graduation was her ticket to the city. While her husband was in the service she became a sales clerk for Montgomery Ward. Later she became a nurses aid, primarily for extra Christmas money. Through normal professional advancement and a heightened sense of personal motivation she became an LPN. But her job changed again when her family moved and she started work in a plant doing parts work. Now she has returned to nursing as a "way to cope" and calls it the "same old rut."

Mrs. Moss's perceptions of learning have been positive. She has always had a desire to learn, a basic curiosity and financial need to work. Her greatest obstacle or barrier to learning may have been her self perception as being ordinary, or more currently, her rheumatoid arthritis. Her list of self-directed learning projects is quite long and is comprised mainly of crafts and hobbies. And throughout her life she has been able to identify her goals and has strived to achieve them.

Why have Mrs. Moss's occupational choices been made? Many of her choices revolved around her husband's or family's needs. Moving prompted at least two major career shifts. Her own curiosity and need to expand prompted two other career changes.

What needs to be probed further is the question of what skills she transferred from one job to another. Further, how did she learn how to get a job? Did anyone teach her job seeking skills or did she pick this knowledge up through experience?

Mrs. French

Mrs. French is 44 years old, has had 7 years of formal education and enrolled in Adult Basic Education to learn how to speak English. Illness and moving prompted her early job choice making. After working on her family's farm for several years she moved into town and began mill work as a laborer. After getting ill she tried out several jobs but eventually moved back to her parents' farm. Then, at age 23, she got married and had children. During this period there was no time for working outside the home. Additionally, her husband was going through a few career changes and trying to become established. Eventually, after the children were past infancy, she obtained a job in a sewing mill to earn some money for herself. Not long afterwards, she took a job in a furniture factory, but that ended when she broke her ankle. Now she's back at sewing, this time at a dry cleaners.

Mrs. French's perception of learning has also been positive. She has been eager to learn about things that have had personal meaning to her and have been connected closely with her goals and life circumstances. Realizing her need to communicate better with others, she enrolled in ABE to learn English. Perceiving her marriage to be in touble, she has learned more about human relations and how to verbalize her feelings with others. Ultimately, she would like to take a course in psychology. Language barriers, family responsibilities and feelings of inadequacies related to expressing her feelings have been her biggest obstacles in life.

Mrs. French's job choices were made mainly in response to her husband's or family's needs. Additionally, needing extra money and also a sense of personal independence were strong motivators later in life. But how did she learn what it took to get and keep a job? Where did she obtain the self confidence that was necessary to break away from the traditional stay-at-home role? These areas need further probing.

Mr. Ambrose

Mr. Ambrose is 52 years old, has had 7 years of formal education and is not enrolled in Adult Basic Education. Starting work on a farm he joined the Navy in order to travel and see the world. After leaving the military he went through a period of "trying out" various jobs such as truck driving and road construction. But after he started raising a family Mr. Ambrose took a job in a tannery where he made shoes. Not only was he earning money for his family's needs but he was also "learning a trade" that would buy him some security. However, as is so common today, he had to take extra work in the evening or early morning hours to meet his financial obligations. He tried bartending, milk delivery and plastics factory work as second jobs. Now, after his family has grown he has made the deliberate choice of returning to farming. He desires the outdoor environment that farming affords him and he has returned to his "real love."

His perceptions of learning are positive in that he believes a person can always learn more. Further, he sees formal education as a way of helping people get ahead in life. Although his goal had been to become a game warden he recognizes the limitations brought on by his shortened formal education; he didn't go to school for "biology and such."

Until most recently, financial reasons were primary motivators for Mr. Ambrose' job choices and career changes. He had a family to raise and needed money to put food on the table. Recently, he has been in a position to choose farming over ~~any~~ other career area mainly because he loves it.

How and when did Mr. Ambrose learn the techniques of getting a job? Where did he learn the ability to sell his skills to prospective employers when he was changing career directions? This area should be probed more deeply.

What do these three case study respondents have in common in the area of job choice making? We know that each of them held several different types of jobs over the years. Further, we know that many of their choices were motivated early on by a desire "to see more," to become more worldly. Later, their choices were prompted by family and financial need. We also know that the women's range and timing of job choices hinged on their husbands' career choices and were also affected by the number and ages of their children. We know that they became rather adept at selling their skills to prospective employers and eventually acquired rather positive perceptions of themselves and their own abilities. Perhaps we also know that these respondents have learned how to survive in their individually complex worlds inspite of personal illness, family tragedy or lack of formal educational degrees.

What we need to probe further are the areas of literacies of working as they relate to the respondents' job choice making and their positive attitudes toward learning. How and when did they learn about getting and retaining jobs? What job alternatives did they have and what alternatives did they consider? Why did they make the choices they made? I suspect that much of what these people learned through "doing", through their job hunting experiencing, could help others in planning more appropriate employment and training programs. Further, this information could help us understand a little better what it means to be functionally competent in the complex world of working.

Outline

THE FAMILY LIFE CYCLE AND LEARNING:

VARIATIONS OF A THEME

W. Warnat

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II. The Family Life Cycle

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III. The Case Studies--Alternative Forms of Family

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    D. No-kin/Widowed Families

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    A. Individual Learning Styles

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    C. Life Management Skills

V. The Case Study Approach

Prospectus

THE FAMILY LIFE CYCLE AND LEARNING: VARIATIONS OF A THEME

W. Warnat

Introduction

A theme running throughout each case study is the impact of familial changes on the learning patterns of the interviewees. Since that theme is not directly addressed by the interviews, this paper will focus on the family aspects of the case studies. It will attempt to reveal how learning is an integral part of the evolution of a person's family, and how family life is an integral aspect of adult learning. This will be accomplished by presenting an interpretation of the family life cycle based on major life events, which occur over the life span, prompting adaptation to changing life roles. The case studies will then be analyzed on the basis of the family forms they currently represent. Their interactions as family members will contribute to an expanded interpretation of their individual adult learning styles, the teaching-learning function of the family, and the life management skills that are developed. It will conclude with an exposition on the efficacy of using the case study approach to further our understanding of how adults learn.

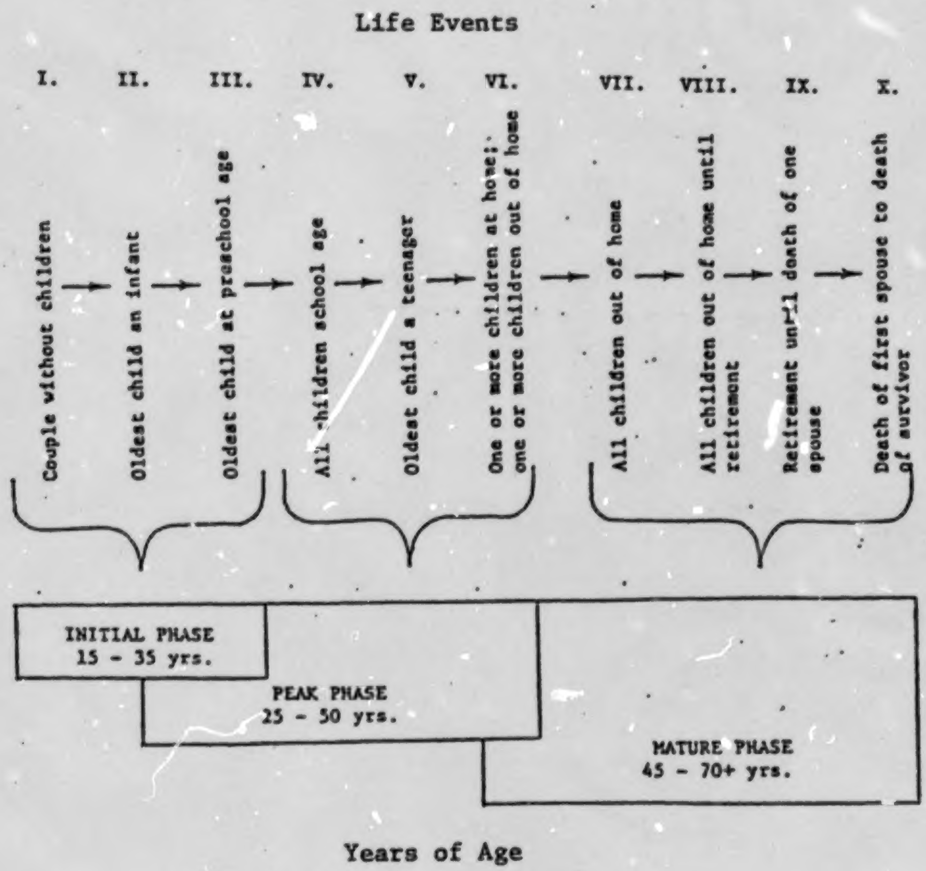
The Family Life Cycle

By understanding the evolving nature of the family life cycle, we are provided with additional insights into the constant role transformations we undergo that relate directly to learning. The case studies reveal the role changes and the commensurate accommodations that occur. Because we are most familiar with the traditional nuclear family model, the interpretation of the family life cycle to be presented uses it as its reference point.

The Developmental Sequence

The family life cycle of the traditional nuclear family is based on three developmental phases that encompass ten life events. Its evolution is portrayed in the illustration given on page 2. Deviations from the traditional nuclear family life cycle result from two other major life events--divorce or widowhood--which contribute to at least one of the following variations in family form: single-parent family, no-kin family, reconstituted (remarried) family, or multigenerational family. Since the never-married are not represented in the case studies, the variations in their family life cycle will not be discussed.

The Life Cycle of the Traditional Nuclear Family


Life Events
I.
II.
III.
IV.
V.
VI.
VII.
VIII.
IX.
X.
Couple without children
Oldest child an infant
Oldest child at preschool age
All children school age
Oldest child a teenager
One or more children at home; one or more children out of home
All children out of home
All children out of home until retirement
Retirement until death of one spouse
Death of first spouse to death of survivor
INITIAL PHASE 15 - 35 yrs.
PEAK PHASE 25 - 50 yrs.
MATURE PHASE 45 - 70+ yrs.
Years of Age

Relationship to Learning

By examining the family life cycle, factors germane to personal learning, many made evident in the case studies, begin to unfold. Some of them include: (1) identifying critical life events contributing to structural and functional change in the family; (2) recognizing the developmental change in family role expectations and performance; and (3) acknowledging the inevitability of adaptation to life events that furthers variability in both family form and family roles.

The Case Studies--Alternative Forms of Family

The case studies represent four forms of family, consisting of

.6 traditional nuclear
.3 no-kin/divorced
.3 retired
.2 no-kin/widowed

Those four family forms will be examined through the case studies, with emphasis on the unique life events that appeared to stimulate a surge in the individual learning process.

Traditional Nuclear Families

Although not a majority, most of the case studies represent the traditional nuclear family, consisting of husband as breadwinner, wife as homemaker, and child(ren) living together. The age span of the six case studies, from 26 to 53 years of age, with this form of family allows us to view the traditional nuclear family at various points in its cycle. These case studies fall within segments III and VIII of the family life cycle and take into account a number of other major life events, such as career change, the death of a loved one, and prolonged illness, that impact on the family and personal learning.

No-kin/Divorced Families

The no-kin/divorced family refers to the divorced person who is living alone. Three of the case studies, all males, fit this form of family. They, too, cover a broad age span encompassing 27, 38, and 52 years of age. In addition, two of the interviewees are physically disabled and two have a history of maladaptive behavior, which have affected their family interaction. How to handle the disability and/or how to improve behavior were expressed learning efforts in the case studies.

Retired Families

Characterized by segment IX of the family life cycle, there are three retired families of married couples only, among the case studies. Two evolved from dual career families. Being in their early sixties, all are in the early stages of retirement and in a new form of family. Each case study presents an alternative means for adjusting. Two are concentrating their energies on developing new living patterns: One taking a leisure orientation; the other taking a retirement career orientation. The third devotes increased effort to a well established way of life based on a deep religious commitment.

No-kin/Widowed Families

Both widows in the case studies live independently, by themselves, and therefore represent the no-kin/widowed family. One evolved from a reconstituted family. While the death of a spouse has been the major life event to effect their later years, one widow felt that her divorce was a much more traumatic experience to adjust to. Learning to adjust to widowhood and living alone remains a dominant theme for both even though one has been widowed for thirteen years.

Implications for Adult Learning

By examining the family life cycle of the adult learner, we become cognizant of other learning mechanisms operating in response to the life events a person experiences. While some life events form natural, sequential clusters and others occur at random, all require handling. Through the case studies, we have unique exposure to this phenomenon, a phenomenon which becomes more pronounced as we progress through the life span and which reveals the highly personal nature of the adult learning process.

Individual Learning Styles

The case studies highlight the diversity of adult learning styles. However, the uniqueness of those styles, from individual to individual, becomes even more apparent through an examination of life events, since life events promote natural learning, which is spontaneous and unplanned. Because family is a prevailing theme throughout the case studies, the many, related life events recounted in them can contribute to expanding existing interpretations of how learning patterns are developed.

The Family's Teaching-learning Function

The case studies reveal the kaleidoscopic nature of the family life cycle. By presenting them as personal, oral histories, we are provided ample evidence of the families teaching-learning function. Through them we are able to see how, over time, families change form and function, and how individuals at different points in their development, especially during the adult years, respond to those familial changes. In examining life events which occur within the family milieu, the notion of the family as a living-learning laboratory begins to unfold.

Life Management Skills

The case studies justify approaching life events as learning lessons. Within the context of the family life cycle, life management skills are developed as a result of life events. Through the life events presented in the case studies, many of those skills are identified. For example:

.caring for a terminally ill family member
.accepting not being able to adopt a child
.sharing a life with someone else, upon marriage
.adjusting to seperation from children following a divorce
.restoring the fidelity of an unfaithful spouse

The Case Study Approach

The case studies substantiate the intrinsic nature of family forces in stimulating divergent learning operations and molding unique learning styles throughout the life span. Even though the intent of this series of case studies was geared toward structured and intentional learning during adulthood, the methodological protocols of "milestone memories" and "coping with conflict" exposed learning that went beyond. Indeed, the case studies highlighted the great gaps in our understanding of human learning by confronting us with the natural learning that occurs through life events.

The Human Condition and the Learning Stance

I don't believe I want to do a paper on the material of the case studies. Here's why.

Standing behind the written case studies is the human condition, in all of its richness, glory, sorrow and inveterate opacity. The studies have this quality: straight-forward description and report is high, interpretation is low. We get a sense of pulsating life pushing through the interstices of our English language whose words and grammar demand a Shakespear or an Elliot but get a case study. Still, that palpable life does come through in all of its pristine unintelligibility, in all of its Heideggerarian (?) or Zen "isness".

I stand in awe of the courage of these people: courage before learning (but sometimes aided by their learning as if taking a deep breath before the plunge) as being is before comprehension, that is, prior in both time and meaning. To add our meanings to who they are and what they do is the start of intervention. In the post-positivist era, knowledge is power, and research is its handmaiden. In the name of social engineering, what have we wrought in the Twentieth Century?

Do not the cases invite a respite from the do-goodisms of the education strategy? Are not the cases shadows cast by living creatures who have survived this Century with an integrity, a wholeness most of we "researchers" are in want of? This is not a rural romanticism; some have been to the city, lived and worked there; others have flown above or travelled through them. Their counterparts live in the Urban ghettos, also survivors. They live in the culture of any poverty, Western or Eastern; and they have learned to learn as they have learned to breathe; outside of, in spite of, rarely (though fortuitously, occasionally) because of the education strategy and institution.

But if the cases are shadows cast by living, sentient creatures, what is the source of the light? Is it not us: first, the reporters as tape recorders and pencil-paper freaks; second, the reporters as reflective persons trying to put together a story; third, those of us who gather round this feast of the phenomenology of human learning, our left brains panting to get at the choicest morsels. Oh, my God, papers, monographs, methodologies, protocols, anthologies, programs, policies, delivery systems, the National Institute for the preservation of a dying system, and those delicious interventions by which we legitimate our existence in the name of saving somebody from him/herself!

First, before I choose my morsel, celebrate with me the right brain of learning and action.

> To learn
> One accumulates day by day.
> To study Tao,
> One reduces day by day.
> Through reduction and further reduction
> One reaches non-action,
> And everything is acted upon.
> Therefore, one often wins over the world
> Through non-action.
> Through action, one may not win over the world.

(Chapter 48, the Tao Te Ching, translated by Chang Chung-yuan)

I do not want to intervene. A little money might help some of them, through a guaranteed annual income with no strings attached, as proposed by Abba Lerner, the Israeli economist, thirty some odd years ago. If you can accept this heresy, I do not even want to understand them. But I might want to understand better what I understand about human learning, fully humanlearning, provoked by their self accounts of living and learning, and in such a way which does not deface them or make them liable to become numbers in an educational survivors' body count.

A few years ago, I came to my first attempt at developing a new paradigm for fully human learning as a consequence of working with thousands of citizens of all walks of life in helping them invent their futures. I mean that kind of human learning which is beyond neurology, behavioural psychology and information systems, building on them but going beyond them; beyond the organic metaphors of human development or social biology; to the metaphors of intentionality, purpose, choice, the unconscious, the world myths of becoming human, the transcending activities which leave their mark on all civilizations and on all human beings by virtue of their being human. I called it the Learning Stance: a posture in which the person confronts his or her world as a call to learning, not unlike the upside down posture of the new born, held by the heels, smacked sharply on the bottom, and called to do what he or she is born to do: breathe.

To learn, we all need a good smack. But most of us get a good smack: that's the nurturing, bonding, survival enclave of the family. Within its experience, we learn our language as a way of impacting on the world of our loved ones, including self-impacts. And we learn other things as we learn language (non-verbal as well verbal, images as well as ideas, signs as well as symbols, feelings as well as cognitions). The case studies tell us about these: sharing in big families, self-reliance, farming skills, growing up skills, self-control. But we are not surprised. These are a continuing reaffirmation of our interacting with our world so as to grasp it rather than solely being grasped by it.

My paradigm for fully human learning has, not surprisingly, a history. First through the covenants and bargainings of the ancient Jews with their Lord (the first representation of isness: "I am who I am"), through the transmutations of the Greek philosophers's rationalisms, in to the dynamic psychologies of Jung, Fromm, May (etc.), the notion of human agency is born and built upon. Human agency receives so strong a confirmation in these studies, and even when some of the persons can not make a good thing in their interactions with their worlds. In the paradigm of the learning stance, we understand the agency of human learning thus:

(1) learning is the creation of meanings new to the learner.

(2) learning deals with change in any and all of its aspects and settings. It equips change with a set of meanings which enable the learner to intervene in the experience of it; to mold, transform, appropriate, guide, withdraw from or render it actionable according to some view of what is worthwhile.

(3) learning is never neutral. It always has a moral content and it always requires a moral judgement about its worth as well as a technical-instrumental evaluation of its effectiveness and its efficiency.

There is nothing here to prove. The case studies are beyond evidence. The notion of the agency of human learning, as a form of the fuller agency of the person, is a point of view. But all definitions, all models, all theories (and even all programs and policies) are not a statement of what is. They are a point of view, an observation post for understanding and/or action.

These persons have used learning in their own behalf, with some unmeasurable quality of choice and deliberation. But they have not always used learning in their own behalf, as their own words declare. Sometimes they have opted for other stances towards the world. For example, many of these persons, creatures of a Western culture, have hard times talking about their feelings; have hard times (by their report in the case studies) dealing with their feelings; find it difficult to locate a language and a discipline of feelings which equals in agency and precision the language and discipline of their psycho-motor skills and the language and discipline of the cogitive domains. How precise and concrete are the reports about "how I think" as distinguished from "how I feel".

Does this suggest an intervention? Persons choosing a pastor, a clinical psychologist, a faith healer, a marriage encounter group or the paradigms of the "soaps" are free to do so. We are caught in a contradiction which these persons confirm. Can we understand human learning in such a way that persons can learn to deal with the unconscious intentionality of human feelings and the soaring of the human spirit as they learn to deal with farm implements, upholstery, barn design, wiring, sewing and the like?

Clearly, we are in a domain beyond compulsion, certification, institution. A response (not an answer!) is suggested. My own work in discovery and imaging, as constituent parts of futures-invention, parallels their practice of imaging. Here is a great, unexplored (relatively) arena of human learning: developing the disciplines of imaging, mastering its craft, so that each of us can multiply our possible alternative histories, emancipate our biographies, past, present and future, so that we can move beyond the ideosyncrasies of our place, our birth, our status, to new possibilities.

In a world very close to losing itself, there is nothing more we need. These case studies constitute, for me, an affirmation of that possibility.

Warren L. Ziegler
Denver, Colorado
February, 1981

APPENDIX G

Bolton Retreat Schedule

NIE Adult Learning Project

"Bolton Retreat"
Bolton Valley Resort -- Bolton, Vermont
Oct. 23-25

AGENDA

Thurs. Oct. 23

7 p.m. - 11:00	Hospitality Suite, Room 113 Bolton Lodge

Fri. Oct. 24

7:30 - 8:30	Breakfast
8:30 -10:00	Welcome/Introductions Ken Fishell Connie Leean and Burt Sisco
10:00 -10:15	Coffee Break
10:15 -12:00	Presentation/Discussion of Tough Replication Phase
12:00 - 1:00	Lunch
1:00 - 1:30	Presentation/Discussion of Case Study Phase Methodology
1:30 - 2:30	Tentative Analysis of Developmental Data (Dr. Jill Tarule)
2:30 - 3:30	Tentative Analysis of Cognitive Style Data (Dr. Charles Letteri)
3:30 - 5:30	Afternoon Recreational Break Tennis, hiking, etc.
5:30 - 6:30	Hospitality Hour, Room 113
6:30 - 8:00	Dinner
8:00 -10:00	Discussion of Case Studies

Sat. Oct. 25

7:30 - 8:30	Breakfast
8:30 -12:00	Discussion of Implications of Research
12:00 - 1:00	Lunch
1:00 - 4:00	Discussion of Monograph Topics/Issues

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APPENDIX H

Rock Point Retreat Schedule

Rock Point Conference
NIE Adult Learning Project
February 14-17

SCHEDULE

February 14 - Saturday

8:00 p.m.	Conference Center open for arrival
9:00 - 11:00 p.m.	Hospitality Hour

February 15 - Sunday

7:15 - 8:15 a.m.	Breakfast
8:15 - 9:15	Movement exercises with Jeanette Bolender
9:15 - 10:30	Round-the-Table * (described in letter)
10:30 - 10:45	Coffee Break
10:45 - 12:00	Round-the-Table, continued
12:00 - 1:00 p.m.	Lunch
1:00 - 1:15	Overview of Critiquing Guidelines
[1:15 - 3:45]	Clarify/Critique Sessions
1:15 - 2:00	Ziegler
2:00 - 2:45	Mattuck-Tarule
2:45 - 3:00	Coffee Break
3:00 - 3:45	Letteri & Kuntz
3:45 - 5:30	R & R time - Tai Chi, Meditation, Skiing, etc.
5:30 - 6:30	Hospitality Hour
6:30 - 7:45	Dinner
[7:45 - 9:45]	Clarify/Critique Sessions
7:45 - 8:30	Warnat
8:30 - 9:45	Roberts
9:45 - 10:00	Benediction
10:00 - ?	Hospitality

February 16 - Monday

7:15 - 8:15 a.m.	Breakfast
8:15 - 9:15	Movement exercises with Jeanette Bolender
[9:15 - 12:15 p.m.]	Clarify/Critique Sessions
9:15 - 10:00	Stake
10:00 - 10:15	Coffee Break
10:15 - 11:00	Hiemstra
11:00 - 11:45	Richardson
11:45 - 1:00	Lunch
1:00 - 3:00	Voorheis, Sisco, Leean
3:00 - 4:30	Reflections - led by Daloz
4:30 - 5:30	R & R
5:30 - 6:30	Hospitality Hour
6:30 - 7:45	Dinner
7:45 - 9:45	Discussion of Case Study Themes and Wrap-Up
9:45 - 10:00	Closing Ritual
10:00 - ?	Hospitality

APPENDIX I

First Annual Vermont State Conference on Adult Learning Research (Brochure)

First Annual Vermon
State Conference on
Adult Learning Research

March 5-6, 1981

Colonnade Inn, Lyndonville, VT

Portraits of Adult Learners:

The Vermont Experience

KEYNOTE ADDRESS

"One Third of a Nation:
A Literacy Army for the 80's"

Speaker:
JONATHAN KOZOL

Author of *Death at an Early Age, Children of the Revolution* and *Prisoners of Silence: The Struggle for Literacy*.

Co-sponsored by the UVM/NIE
Adult Learning Project and VSC/FIPSE
Adult Mentoring Project

Pre-Registration for Conference on PORTRAITS OF ADULT LEARNERS

____ Total Conference fee: Thursday Hospitality Hour and Banquet; Keynote address; Friday sessions and Lunch ($20.00)
____ One Nite only: Thursday nite Hospitality Hour, Banquet and Keynote Address ($15.00)
____ Keynote Address only: ($5.00)
____ One Day only: Friday sessions and Lunch ($10.00)

Name ____________ Title ____________
Address ____________ Organization ____________
City & State ____________ Zip ____________

Make checks payable to: Office of External Programs

Return by Feb. 15, 1981 to: PORTRAITS OF ADULT LEARNERS Conference
Office of External Programs
P.O. Box 292, Montpelier, VT. 05602

tear here

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tear here

NIE Adult Learning Project
228 Waterman Building
University of Vermont
Burlington, Vermont 05405

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Organization
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A word about the Sponsoring Projects:

In the context of rural Vermont, two unique research studies have been underway during the past year and a half. The **UVM Adult Learning Project**, funded by the National Institute for Education (NIE), has dealt with independent learning efforts among little educated, rural adults. Through structured interviews the project studied the extent of learning, how people learn on their own, and how developmental changes and cognitive style affect the way one learns. Findings suggest some ways these adults can be best served. Policy implications for adult education programs and outreach are also evident.

The second study, Vermont State College's **Adult Mentoring Project**, sponsored by the Fund for the Improvement of Postsecondary Education (FIPSE), has focused on how adults develop throughout their formal education. The findings suggest: that many adults seek far more than "practical training"; that an understanding of adult development can sharply increase the impact of education; and that the mentor plays a crucial role in promoting development.

Purpose of the Conference:

The purpose of this conference is to share the findings from these studies in light of what they suggest about the rural adult learner. Participants will engage in discussing the implications of this information for their own professions or organizations.

CONFERENCE PROGRAM

(All meetings scheduled at Colonnade)

Thursday March 5

4:00 - 6:00 p.m.	Registration
5:30 - 6:30 p.m.	Hospitality Hour
6:30 - 7:30 p.m.	Dinner
7:00 - 8:15 p.m.	Opening Remarks
8:15 - 9:30 p.m.	Keynote Address: Jonathan Kozol

Friday March 6

7:15 - 8:30 a.m.	Breakfast
8:30 - 10:00 a.m.	Presentation of NIE Research
10:00 - 10:20 a.m.	Coffee Break
10:20 - 12:00 noon	Presentation of FIPSE Research
12:00 - 1:30 p.m.	Lunch/Discussion
1:30 - 2:30 p.m.	Participant Information Exchange
2:30 - 2:45 p.m.	Coffee Break
2:45 - 4:00 p.m.	Panel Discussion

WHO WILL ATTEND

- Adult Basic Education Personnel
- University and College Administrators
- State of Vermont Legislators
- Local Adult/Community Education Teachers and Directors
- Extension Service Personnel
- Human Service Rural Outreach Personnel
- Adult Continuing Education Personnel
- CETA Staff
- Adult Education Brokers and Counselors

CONFERENCE DETAILS

The conference is located in the beautiful Northeast Kingdom, site of the research projects. Lyndonville's *Colonnade Inn* is easily assessible: Exit 23, Interstate 91 North, on Route 5 in Lyndonville.

Reservations at The Colonnade are the responsibility of participants.

Special rates will be offered which range from $17.75 to $25.50. Call 802/626-9316 for reservations.

The Conference and banquet costs have been kept at a minimum to encourage all interested to attend. However, space is limited.

Please fill out the pre-registration form on the reverse side and return with your check by Feb. 15, 1981. (No refunds after Feb. 25)

For additional information, contact:

PROJECT PERSONNEL:

NIE: Dr. Connie Leean, Proj. Director
Mr. Burton Sisco, Res. Associate
802/656-2538

FIPSE: Dr. Larry Daloz, Proj. Director
802/828-2401

APPENDIX J

First Annual Vermont State Conference on Adult Learning Research (Conference Schedule)

FIRST ANNUAL VERMONT STATE CONFERENCE

On ADULT LEARNING RESEARCH

"Portraits of Adult Learners"

March 5-6, 1981
Colonnade Inn, Lyndonville, Vt.

Thursday March 5 - Banquet Room

4:00 - 6:00 p.m.	Registration
5:30 - 6:30 p.m.	Hospitality Hour
6:30 - 7:45 p.m.	Dinner - Buffet
7:45 - 8:15 p.m.	Opening Remarks
8:15 - 9:30 p.m.	Keynote Address: Jonathan Kozol

Friday March 6 - Banquet Room

8:00 - 8:30 a.m.	Coffee and Rolls in Meeting Room
8:30 -10:10 a.m.	Presentation of NIE Research
10:10 -10:30 a.m.	Coffee Break
10:30 -12:00 p.m.	Presentation of FIPSE Research
12:00 - 1:00 p.m.	Lunch
1:00 - 1:30 p.m.	Reaction to Research: Jonathan Kozol
1:30 - 2:30 p.m.	Participant Information Exchange Groups
2:30 - 2:45 p.m.	Coffee Break
2:45 - 3:30 p.m.	Panel Discussion of Participants' Issues/Concerns
3:30 - 3:45 p.m.	Wrap Up - Next Steps
3:45 - 4:00 p.m.	Evaluation

The University of Vermont
COLLEGE OF EDUCATION AND SOCIAL SERVICES
DEPARTMENT OF ORGANIZATIONAL, COUNSELING, AND FOUNDATIONAL STUDIES
WATERMAN BUILDING, BURLINGTON, VERMONT 05405

April 1, 1981

Dear "Portraits" Participant:

As we promised at the "Portraits of Adult Learners" Conference, March 5-6, we're sending along the names and addresses of participants in hopes that this will be helpful in establishing an Adult Learning network.

Just a word or two about the conference. Evaluations were, for the most part, quite favorable, indicating that this kind of research sharing and deliberations should continue. We realize that a great deal of information was presented in a brief amount of time and that some wished to deal in more depth with the issues these presentations generated. Hopefully that can happen as further meetings and conferences of this nature are offered.

In light of this, let me highlight a few upcoming conferences which would be good opportunities to continue what began at Lyndonville.

1. A conference on "Literacy, Empowerment, and Social Change" — April 20-24, 1981 at The University of Vermont — sponsored by the College of Education's Center for World Education and The Cross Cultural Committee. Please call David Robinson (656-2030) for more details.
2. "Vermont Rural Educational Leadership Conference," May 1, 1981 at the Radisson Burlington Hotel. Call Dr. Harry McEntee (656-2936) for more details.
3. Mott Foundation Community Education Planning Meetings (several Vermont Regional meetings to be scheduled during May and June, 1981). Call Sandra Robinson (828-3101 or Howie Shapiro (254-4439) for details.

So, lots of events springing up. Hope to see you at some of these.

Thanks for supporting our first effort of reinforcing a research interest in adult learning within Vermont. Go well and have a productive spring.

Sincerely,

Connie Leean
NIE Project Director

An Equal Opportunity Employer

"PORTRAITS" Conference Participants

March 5-6, 1981 - The Colonnade Inn

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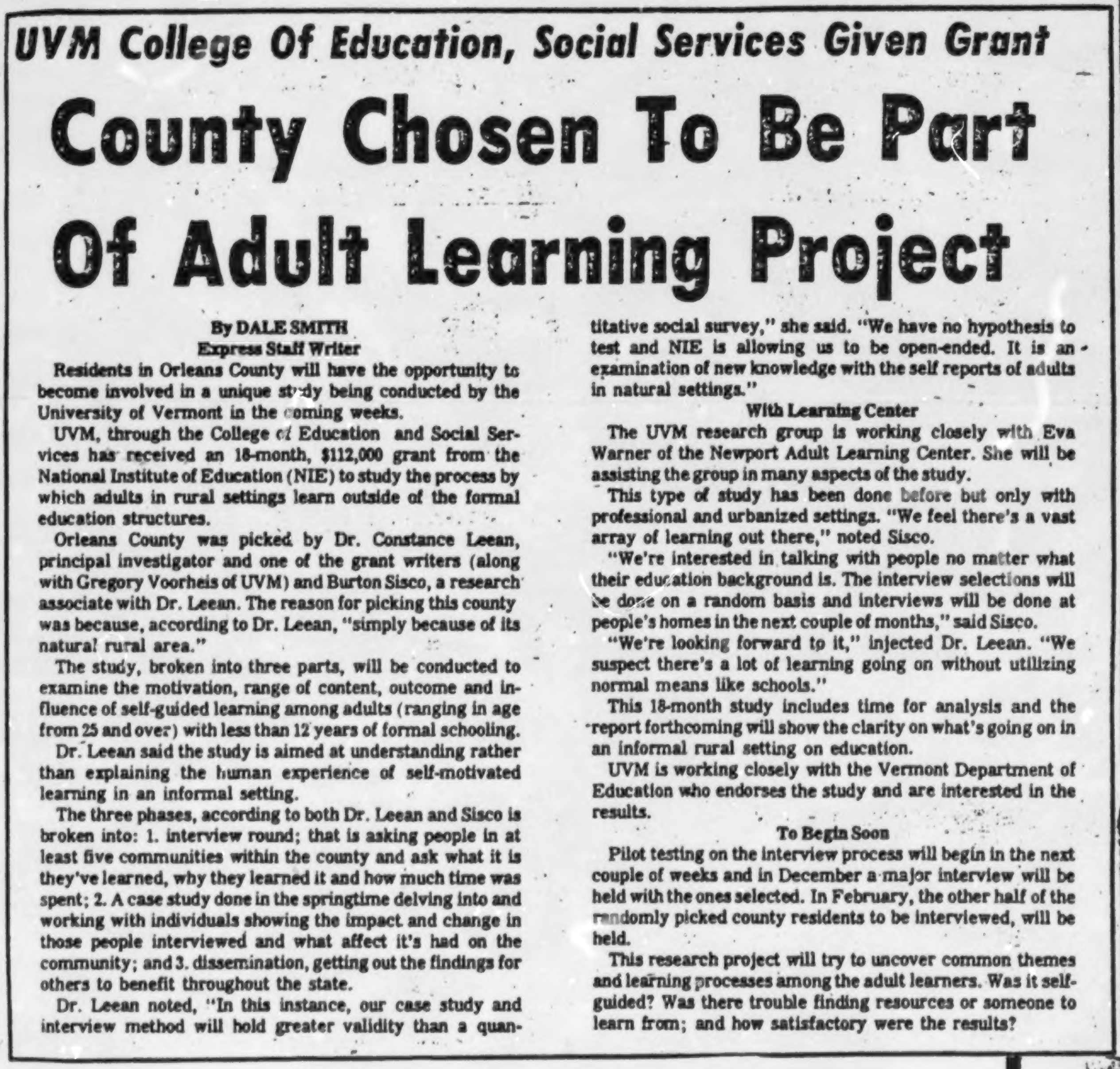
(Listing of 80+ participants)

APPENDIX K

News Articles on the NIE Project

Tuesday, October 23, 1979
The Newport Daily Express



UVM College Of Education, Social Services Given Grant

County Chosen To Be Part Of Adult Learning Project

By DALE SMITH
Express Staff Writer

Residents in Orleans County will have the opportunity to become involved in a unique study being conducted by the University of Vermont in the coming weeks.

UVM, through the College of Education and Social Services has received an 18-month, $112,000 grant from the National Institute of Education (NIE) to study the process by which adults in rural settings learn outside of the formal education structures.

Orleans County was picked by Dr. Constance Leean, principal investigator and one of the grant writers (along with Gregory Voorheis of UVM) and Burton Sisco, a research associate with Dr. Leean. The reason for picking this county was because, according to Dr. Leean, "simply because of its natural rural area."

The study, broken into three parts, will be conducted to examine the motivation, range of content, outcome and influence of self-guided learning among adults (ranging in age from 25 and over) with less than 12 years of formal schooling.

Dr. Leean said the study is aimed at understanding rather than explaining the human experience of self-motivated learning in an informal setting.

The three phases, according to both Dr. Leean and Sisco is broken into: 1. interview round; that is asking people in at least five communities within the county and ask what it is they've learned, why they learned it and how much time was spent; 2. A case study done in the springtime delving into and working with individuals showing the impact and change in those people interviewed and what affect it's had on the community; and 3. dissemination, getting out the findings for others to benefit throughout the state.

Dr. Leean noted, "In this instance, our case study and interview method will hold greater validity than a quantitative social survey," she said. "We have no hypothesis to test and NIE is allowing us to be open-ended. It is an examination of new knowledge with the self reports of adults in natural settings."

With Learning Center

The UVM research group is working closely with Eva Warner of the Newport Adult Learning Center. She will be assisting the group in many aspects of the study.

This type of study has been done before but only with professional and urbanized settings. "We feel there's a vast array of learning out there," noted Sisco.

"We're interested in talking with people no matter what their education background is. The interview selections will be done on a random basis and interviews will be done at people's homes in the next couple of months," said Sisco.

"We're looking forward to it," injected Dr. Leean. "We suspect there's a lot of learning going on without utilizing normal means like schools."

This 18-month study includes time for analysis and the report forthcoming will show the clarity on what's going on in an informal rural setting on education.

UVM is working closely with the Vermont Department of Education who endorses the study and are interested in the results.

To Begin Soon

Pilot testing on the interview process will begin in the next couple of weeks and in December a major interview will be held with the ones selected. In February, the other half of the randomly picked county residents to be interviewed, will be held.

This research project will try to uncover common themes and learning processes among the adult learners. Was it self-guided? Was there trouble finding resources or someone to learn from; and how satisfactory were the results?

1

The Chronicle, Vol.6, No.32, Oct.26, 1979

UVM Conducts Study On Adult Learning

"Learned anything new lately?"

That's a question a random sample of Orleans County residents will be asked over the next six months, as part of a University of Vermont study of how rural adults learn outside of schools.

The people who won a $112,000 federal grant to make the study were in Barton this week to discuss their plans. They are Dr. Constance Leean, an assistant professor at UVM's College of Education and Social Services, and Burt Sisco, her research associate.

They plan to conduct detailed interviews with 150 people in the county, to find out what sorts of things they learn, where and how they learn them, and why.

The study will also involve detailed case studies of some of the learners who turn up in the sample.

The study is not aimed at any particular result, Dr. Leean said. "It's an exploratory research program to describe the state of affairs more clearly than ever before."

Researchers on the project will carry identification, and all information collected will remain strictly confidential, Mr. Sisco said.

THIS WEEK

Volume 9 Number 15 A Publication of the University of Vermont September 28 - October 4, 1979

Ed & SS Presented Major Grant To Study Adult Learning Process

It is easy to understand the motivation behind college students as they pursue their education, but what of those who desire to learn, but are not formally enrolled in an educational institution?

The College of Education and Social Services has received an 18-month, $112,000 grant from the National Institute of Education (NIE) to study the process by which adults in rural settings learn outside of the formal education structure.

Dr. Constance Leean, principal investigator, and Burton Sisco, research associate, will conduct a three-phased investigation in a rural Vermont County to examine the motivation, range of content, outcome and influence of self-guided learning among adults with less than 12 years of formal schooling.

The project, which begins with a detailed interview of equal numbers of male and female adults (over 25 years of age), is aimed at "understanding rather than explaining the human experience of self-motivated learning in an informal setting," according to Dr. Leean, an assistant professor in UVM's College of Education.

"In this instance, our class study and interview method will hold greater validity than a quantitative social survey," she said. "We have no hypothesis to test, and NIE is allowing us to be open-ended. It is an examination of new knowledge, gleaned from the self reports of adults in natural settings."

In the area of adult learning, the Vermont study is one of only three, nationally, that NIE has chosen for funding. Previous studies examining nonformal learning have dealt with professionals, suburbanites, young mothers and the unemployed. The Vermont study will be one of the first to be done in a rural setting and is the first to focus attention on the "undereducated" population.

Using a replica of Allen Tough's 1971 study from the Ontario (Canada) Institute of Studies in Education, the two researchers will attempt to understand the deliberate efforts of adults trying to learn about a specific subject on their own. In the interview phase, they will seek to examine learning projects

continued on page 3

Ed & SS Given Major NIE Study Grant

continued from page 1

identified by these adults, which have been at least seven hours in duration.

Tough has already agreed to come to Vermont in early October to help train prospective interviewers for the project.

During Phase II, which begins in the spring, Leean and Sisco will select a small group (10-15) of these adults who have been identified as "self-guided" learners and conduct intensive case studies. The effects of their learning process on themselves, their families, and their communities will be studied, as well as the impact of their educational background on learning efforts.

Two additional College faculty, Drs. Mark Smith and Charles Rathbone, will assist in the conceptualization and analysis of data. Also assisting in this process will be other UVM faculty, including Dr. Fred Schmidt of the newly created Rural Studies Center, and Dr. Peter Woolfson of the anthropology department.

Phase III of the project will involve dissemination of the findings in a series of planned "mini-conferences" that will bring together authorities from Vermont and throughout the nation.

The research will try to uncover common themes and learning processes among the adult learners. Was it self-guided? How much was preplanned? Was there trouble finding resources or someone to learn from; and how satisfactory were the results?

UVM Completing Learning Study

BOLTON — A University of Vermont study of the learning habits of rural adults has been discussed by educators from throughout the country.

The $112,000 Adult Learning Project will be completed and released in February, according to UVM research associate Burt Sisco. It is focused on adults who have fewer than 12 years of formal education.

The 18-month study, conducted by the UVM College of Education and Social Sciences, was one of six National Institute of Education grants awarded to study adult learning.

Sisco said the study began with interviews of about 100 adults living in rural Vermont. Fourteen of those people then were studied in more depth.

"There is a great deal of self-guided learning going on in the home setting. We were interested in how their past influences their learning efforts of the present and how they go about thinking," he said.

The last phase of the project is to analyze the information collected and write a final report, he said.

Educators from California, Colorado, Illinois, Washington and Canada are contributing to the final phase, and met last week at Bolton Valley Resort.

Sisco said he hopes the report will help rural communities understand the problems of their adult population.

"We are looking more in depth at the learning processes, problem-solving skills, how they approach problems and the resources in the communities that help them," he said. "Finally we'll look at the implications of the research and application as it relates to learning institutions."

/ermonters Are Learning Constantly
rom Day-to-Day Events, Study Says

By JODIE PECK

Free Press Staff Writer

Undereducated adults in rural ermont are learning constantly id realize the importance of attain- g new skills, according to the sults of an 18-month University of ermont study.

"Life is learning and learning is e. They go hand-in-hand," said a -year-old retired postal clerk.

Another man said, "If you're not arning, you're dead."

They are nong the 14 rsons in Or- ans County ho partici- ated in the Na- onal Institute f Education dult Learning roject.

LEEAN

The purpose as to look at e way adults arn in rural ettings, particularly those older an 25 who have less than 12 years f education, said Constance L. eean, a UVM assistant professor nd principal investigator for the roject.

A young plumber learned elec- ical circuitry by reading and ask- g questions. He said he learns etter by doing it himself than from achers who "preach at you."

A 63-year-old retired farmer who learning about operating a camp- round with his son said, "Usually I o right at a problem and this helps e to learn. Learning by doing I uess you'd call it. Still, if I don't ave the answer, I'll ask others who now."

More than 90 residents in the ortheast Kinedom county were in- erviewed in the first phase of the roject, and 14 were selected for ore in-depth study.

The research found "there is a esire to continue to learn, some in ore formal ways as well as non- rmal or self-directed," Ms. Leean aid. "They want to expand their orizons and grow in more personal ays."

The adults interviewed were in- erested in learning both practical nd creative skills. Many wanted to ravel to specific places to learn nore about subjects in which they vere interested, she said.

She hopes the study will result in ew policies in education, such as ow to get information to rural [illegible]

Education

people, and different ways of offering education.

Many people interviewed said they prefer to learn at home. One woman suggested a visiting teacher concept, similar to visiting nurses.

SISCO

A teacher could visit a home once a week and people in the neighborhood could gather for a class.

"They're good self-teachers," said research assistant Burton Sisco. "They do a lot better than a lot of higher education types believe or give them credit for. People have to be tested and sometimes an outside motivator is good."

Undereducated people often are stereotyped, and their deficiencies rather than strengths are focused on, Ms. Leean said.

"We need to see them as active learners who are quite skilled in learning. We need to see them from a perspective of strength. A lot of abilities we feel get covered in formal education, they somehow picked up outside," she said.

One participant feels he was beaten out of a job by a man less qualified, but who had the all-important high school diploma.

"The book is good, I'll never disagree with that, but the experience is much better," he said during an interview with researchers.

He returned to Vermont when he was 50 to become a farmer. Because of his ingenuity at developing time-saving devices, his neighbors come to him for advice.

According to the findings, people not taking formal courses delve into about four major learning projects each year. The majority said they prefer learning by experience and in their homes.

Ms. Leean said people go about learning in a variety of ways, but, "There was one particular theme — people often visualize the end product before they get started or as a guide. The motivation for learning is often linked to past experiences and interests."

Many of the people interviewed said they would think of a project and picture it, then put it aside for later development.

These were the first in-depth case studies of rural residents. The learning patterns and processes almost paralleled studies done of highly educated urban people, the researchers said.

In addition to the surveys and interviews, participants were given specific tests to analyze how they learn, Sisco said.

"We ended up with a profile on how the person processes information," he said. "Of the group of 14 people, they ranged the whole scale. It indicated that this group is like a typical population.

"If these people looked very similar to another group of people that are highly educated, what does that say about education and cognitive abilities? It indicated to us that the amount of education is a small indicator of a person's abilities."

The study is in its third phase — getting the information out. Sisco and Ms. Leean have been speaking and attending conferences around the country.

They will lead a workshop on "Portraits of Adult Learners: Implications for Schools," Friday at 1:30 p.m. as part of the first annual Vermont Rural Educational Leadership Conference.

The conference will be from 9 a.m. to 5 p.m. at the Radisson-Burlington Hotel. Workshops and speakers will promote discussion about changes in rural education.

.) Free Press, Sunday, April 26, 1981 • • •

APPENDIX L

Rules of Analysis of Content

RULES:

1. Whenever learning involves another person (even though it appears to be a personal problem) it will be treated as a social/relationship.

2. Unclear statements, question mark.

3. Differentiate between Personal & Medical in health areas.

4. Differentiate between job related and home improvement measures (when person is farmer, especially).

5. In areas of haziness, pay more attention to the language (images) used in description of project than the stated motivation (which may be multiple in meaning and which involves personal judgment).

6. Home Demonstration or other extension programs are S.L.

7. To evaluate acceptable data:

   a) Eliminate learning project when not written up as an intentional learning effort.

   b) Eliminate data when it's not complete - 00

   c) Eliminate learning project when less than 7 hrs.

8. We will review all motivation categories that specify "other" and determine whether they logically fit into an existing category (context analysis), and if not, list in separate column in order to examine clusters of other themes.

APPENDIX M

Miscellaneous

Brochure, Freire Conference

Brochure, First Annual Rural Educational Leadership Conference

Invitational Letter, HEW/NIE Interagency Panel for Research and Development on Adulthood

Schedule and Participant List, AAHE Luncheon Meeting, March 6, 1980

Chickering and Toomey Letters

CENTER FOR WORLD EDUCATION
COLLEGE OF EDUCATION AND SOCIAL SERVICES
AND
CROSS CULTURAL COMMITTEE
UNIVERSITY OF VERMONT
PRESENTS

A CONFERENCE ON LITERACY, EMPOWERMENT, AND SOCIAL CHANGE

APRIL 20-24, 1981
UNIVERSITY OF VERMONT, BURLINGTON, VERMONT

CO-SPONSORED BY: UNIVERSITY OF VERMONT'S CENTER FOR CULTURAL PLURALISM, LATIN AMERICAN STUDIES PROGRAM, DEPARTMENT OF SOCIOLOGY, CENTER FOR RURAL STUDIES, AND INTERMEDIA: NATIONAL COUNCIL OF CHURCHES.

CENTER FOR WORLD EDUCATION
229 WATERMAN BUILDING
UNIVERSITY OF VERMONT
BURLINGTON, VERMONT 05405

LITERACY, EMPOWERMENT AND SOCIAL CHANGE

Conference Schedule

(Note: All sessions to be held on
University of Vermont campus)

MONDAY, APRIL 20, 1981

2:00 p.m.	Registration at Memorial Lounge, Waterman Building.
4:30-6:00 p.m.	Reception for PAULO FREIRE and JONATHAN KOZOL, Memorial Lounge, Waterman Building.
8:00 p.m.	Keynote Address by JONATHAN KOZOL: "LITERACY, EMPOWERMENT, AND SOCIAL CHANGE: LATIN AMERICA." 235 Marsh Life Sciences.

TUESDAY, APRIL 21, 1981

9:30 a.m.	Seminar on "Literacy and Change in Rural Settings: The Vermont Experience." SANDRA ROBINSON, Adult Basic Education-Vt. 115 Commons, Living/Learning Center.
2:00 p.m.	Blue Series: Dialogue Workshop with PAULO FREIRE. 216 Commons, Living/Learning Center.
2:00 p.m.	Seminar on "Literacy and Revolutionary Change in Nicaragua" Film and Discussion. ROBIN LLOYD and DOREEN KRAFT, Green Valley Films. 115 Commons, Living/Learning Center.
8:00 p.m.	Public Dialogue with PAULO FREIRE: "EMERGING THEMES IN THE STRUGGLE FOR EMPOWERMENT." 235 Marsh Life Sciences.

WEDNESDAY, APRIL 22, 1981

9:30 a.m.	Seminar on "Language and Revolutionary Change: China" PETER SEYBOLT, Dept. of History, University of Vermont. 115 Commons, Living/Learning Center.
2:00 p.m.	Blue Series: Dialogue Workshop with PAULO FREIRE. 216 Commons, Living/Learning Center.
2:00 p.m.	Seminar on "Conscientization and Peacemaking in Papua-New Guinea" ROBERT GORDON, Anthropology Dept., University of Vermont. 115 Commons Living/Learning Center.
8:00 p.m.	Public Dialogue with PAULO FREIRE: "CONSCIENTIZATION AT WORK: EXPERIENCES IN AFRICA AND LATIN AMERICA." 235 Marsh Life Sciences.

THURSDAY, APRIL 23, 1981

9:30 a.m.	Seminar on "Literacy and Revolutionary Change: Cuba" JONATHAN KOZOL. 115 Commons, Living/Learning Center.
2:00 p.m.	Green Series: Dialogue Workshop with PAULO FREIRE. 216 Commons, Living/Learning Center.
2:00 p.m.	Seminar on "Adult Learning Patterns in Rural Settings: Vermont" CONNIE LEEAN, Director, and BURT SISCO, Research Associate, Adult Learning Project. 115 Commons, Living/Learning Center.
8:00 p.m.	Public Dialogue with PAULO FREIRE: "BUILDING COALITIONS FOR THE FUTURE." 115 Commons, Living/Learning Center.

FRIDAY, APRIL 24, 1981

9:30 a.m.	Green Series: Dialogue Workshop with PAULO FREIRE. Memorial Lounge, Waterman Building.

FIRST ANNUAL

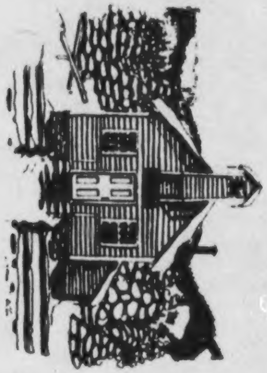
VERMONT RURAL EDUCATIONAL LEADERSHIP CONFERENCE

May 1, 1981

Radisson-Burlington Hotel
Burlington, Vermont

Sponsors;
University of Vermont
College of Education
and Social Services
Center for Rural Studies

The University of Vermont
COLLEGE OF EDUCATION AND SOCIAL SERVICES
OFFICE OF THE DEAN, WATERMAN BUILDING
BURLINGTON, VERMONT 05405



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TOTAL CONFERENCE FEE: COFFEE, LUNCH, KEYNOTE, ALL SESSIONS, AND CONFERENCE MATERIALS $20.00

NAME ______________ TITLE ______________ S.S.# ______________

ADDRESS ______________ ORGANIZATION ______________

TOWN, STATE ______________ ZIP ________ PHONE ________

NAME TO APPEAR ON NAME TAG ______________

MAKE CHECKS PAYABLE TO: UNIVERSITY OF VERMONT

RETURN BY APRIL 20 TO:
Conferences and Institutes
Box 84
Waterman Building
University of Vermont
Burlington, Vermont 05405

FIRST ANNUAL
VERMONT
RURAL EDUCATIONAL
LEADERSHIP CONFERENCE

8:00- 9:00
Registration and Coffee
Foyer

9:00- 9:15
Welcome and Introduction to Conference
Green Mountain Ballroom
Harry J. McEntee
Conference Coordinator

9:15- 9:45
"Rural Educational Leadership — A National Imperative"
Green Mountain Ballroom
Charles A. Tesconi, Dean
College of Education and Social Services
The University of Vermont

9:45-10:15
"Rural Education: Describing the Vermont Context"
Green Mountain Ballroom
Frederick E. Schmidt, Acting Director
Center for Rural Studies, UVM
Herman W. Meyers,
Associate Professor
Department of Organizational Counseling and Foundational Studies, UVM

10:15-10:30
COFFEE BREAK
Foyer

10:30-11:30
CONCURRENT WORKSHOPS: SET A

A-1 "Elements of Excellence in Small Rural Elementary Schools"
Burlington Room
Harry J. McEntee,
Assistant Professor
Department of Special Education, Social Work and Social Services, UVM
Kenneth W. Hood, Assistant Dean
College of Education and Social Services, UVM
Raymond McNulty, Principal
Berkshire Elementary School
Berkshire, Vermont

A-2 "Quality Personnel: Attract, Retain and Enhance"
Montpelier Room
Theodore R. Whalen, Lecturer
Department of Special Education, Social Work and Social Services, UVM

A-3 "The Rural School as the Focus of Community Life"
Vermont Room
Casey Murrow, Extension Assistant Professor, UVM
Bruce Cole, Principal
Marlboro School
Claire Oglesby, Principal
Westminster West School
Gyneth Lumbra , Principal
Montgomery School

11:30-12:30
CONCURRENT WORKSHIPS: SET B

B-1 "The Richness of Culture in Rural Schools"
Burlington Room
Anne W. Woolfson,
Program Coordinator
Department of Professional Education and Curriculum Development, UVM

B-2 "Delivering Special Education in Small Schools, or How Do I Live with PL 94-142?"
Montpelier Room
Idora Tucker, Special Education Consultant
Vermont State Education Department

B-3 "Energy in Rural Schools: Back to the Wood Stove and Other Developments"
Vermont Room
Roger Aubin
Dynamic Integration, Inc.,
Fairlee, Vermont

12:30- 1:30
LUNCHEON
Garden Court
"Legislative Futures"
Bruce Post, Senior Staff
U. S. Senate Committee on Labor & Human Resources

1:30- 2:30
CONCURRENT WORKSHOPS: SET C

C-1 "Perceptions, Values and Community Aspirations for Rural Schools"
Burlington Room
John E. O'Brien, Superintendent
Cabot Public Schools

C-2 "Metaphors and Mushrooms — Implications for Curriculum"
Montpelier Room
Frank J. Watson, Lecturer
Department of Professional Education and Curriculum Development, UVM

C-3 "Portraits of Adult Learners: Implications for Schools"
Vermont Room
Constance L. Leean,
Assistant Professor
Department of Organizational, Counseling and Foundational Studies, UVM
Burton R. Sisco, Research Assistant
Department of Organizational, Counseling and Foundational Studies, UVM

2:45- 3:00
COFFEE BREAK

3:00- 4:00
KEYNOTE ADDRESS
"Educational Leadership Within a Changing Rural Context"
Green Mountain Ballroom
Barbara E. Rose, Executive Director
The Rural Coalition
Washington, D.C.

4:00- 4:15
CLOSING REMARKS
Raymond T. Coward, Research Associate Professor
Center for Rural Studies and
Associate Professor, Department of Special Education, Social Work and Social Services, UVM

4:15- 5:00
Informal Meetings of Interest Groups (to be arranged)
Garden Court

PURPOSE OF THE CONFERENCE

Small town and rural school districts have assumed an active role in the rapidly changing nature of rural America. The contributions of educational leaders in the rural development process have been well documented and have underscored the significant associations between school issues and the circumstances of individual towns and communities. The Vermont Rural Educational Leadership Conference is intended to enhance this resource by providing leaders with an opportunity to share, translate and discuss acquired understandings of the educational process as it occurs in the rural context.

Specifically, the goals of the conference include:

- to facilitate dialogue and debate on educational issues of importance to small towns and rural communities;
- to initiate networks between educators who face common challenges in a changing rural America;
- to exchange ideas for practical and innovative solutions to everyday problems of rural education; and
- to provide opportunities for practicing educators to identify the issues and dilemmas confronting rural schools and to share alternative methods of solution.

This will be the first of what the University anticipates will be an annual conference attracting rural educational leaders.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
NATIONAL INSTITUTE OF EDUCATION
WASHINGTON D.C. 20208

Dear Colleague:

You are cordially invited to attend the next meeting of the Federal Interagency Panel for Research and Development on Adulthood. It will be held:

Thursday, April 23rd, 9:30 a.m.
Room 1310, Longworth Building

The title of the session is:

perspectives on adult literacy:
THE LEARNER AND THE WORKPLACE

The speakers will be:

Dr. Thomas Sticht
Vice President and Director
Human Resources Organization
Alexandria, Virginia

Dr. Constance L. Leean
College of Education and Social Services
University of Vermont -Burlington

Both Dr. Sticht and Dr. Leean are extremely well-known leaders in the field of adult literacy research and the various methods of literacy instruction. The issues that will be discussed, among others, will be the literacy demands of the workplace and their relationship to the literacy skills taught in schools, and the learning needs and literacy strategies of rural, educationally disadvantaged adults. There will be ample time for discussion.

I look forward to seeing you on April 23rd.

Sincerely yours,

Jerome E. Lord
Chairman
Federal Interagency Panel for Research and Development on Adulthood

LUNCHEON MEETING
March 6, 1980 AAHE
Sponsored by The University of Vermont's
NIE Adult Learning Project

AGENDA

I. Welcome - Dr. Connie Leean, Project Director

II. Introductions

III. Research Efforts to Date
  A. Methodological procedures
  B. Status of data analysis
  C. Dissemination process

IV. Case Study Phase
  A. Participatory research
  B. Literacy dimensions

V. Implications of Research
  A. Literacy
  B. Delivery System
  C. Policy

NIE - ADULT LEARNING PROJECT

Guest list for the AAHE Conference Luncheon Meeting, March 6, 1980 **

Marcia Mentkowski, Ph.D.
Director of Evaluation
Alverno College
Milwaukee, WI 53215

Richard E. Peterson
Research Psychologist
Educational Testing Service
1800 Massachusetts Avenue, NW
Washington, DC 20016

David Imig, Executive Director
AACTE
One Dupont Circle
Washington, DC

Dr. Lois Lamdin
Assistant Dean
Empire State College
Saratoga Springs, NY

Penelope Richardson, Ph.D.
Department of Higher & Postsecondary
Education
University of Southern California
Los Angeles, CA 90007

James R. Dorland, Executive Director
National Association for Public
Continuing and Adult Education
1201 Sixteenth Street, SW
Washington, DC 20036

Lloyd H. Davis, Executive Director
National University Extension Service
One Dupont Circle - Suite 360
Washington, DC 20036

Dr. Gary A. Eyre, Executive Director
National Advisory Council on Adult
Education
425 13th Street NW
Washington, DC 20004

Linda S. Hartsock, D. Ed.
Executive Director
Adult Education Association, U.S.
CAE, 810 18th Street NW
Washington, DC

Dean William Maehl
University of Oklahoma
College of Liberal Studies
1700 Asp Avenue, Suite 226
Norman, OK 73037

Dawn M. Patterson, Ph.D.
Assistant Dean
College of Continuing Education
University of Southern California
University Park
Los Angeles, CA 90007

Joan Knapp, Ph.D.
Educational Testing Serivce
Princeton, NJ

Leslie Duly, Ph.D.
University of Nebraska-Lincoln
College of Arts & Sciences
1223 Oldfather Hall
Lincoln, Nebraska 68588

Rita Weathersby, Ph.D.
Assistant Professor of Organization
and Management
Whitamore School
University of New Hampshire
Durham, NH

OK - from phone call

Maria Burgio, Ph.D.
NYC Community College
Institute of Study for Older Adults
300 Jay Street
Brooklyn, NY 11201

Ltr. sent to:
Jean Miller
enc. - guest list

** Please note. This list is incomplete as of 2/19/80

MEMPHIS STATE UNIVERSITY
College of Education
MEMPHIS, TENNESSEE 38152

Center for the Study of Higher Education

March 17, 1980

Constance Leean and
Burton Sisco
L/L Center - Commons 244
University of Vermont
Burlington, VT 05405

Dear Connie and Burton,

I enjoyed the chance to have breakfast with you and to hear about your interesting project. I found your report on the early findings, which I had a chance to read after I returned here to Memphis, most facinating and a welcome addition to the growing pool of research on adult learning efforts. I have enclosed two copies of the Milestone Exercise which I mentioned to you and two copies of the Prospectus and Outline for The Future American College book. If some of The Future American College chapters sound of special interest to you, I would be happy to send copies along, if you let us know which ones. The Tough chapter will not add much to your knowledge of his work, inasmuch as it is simply a brief summary of things as they stood about a year ago, and I'm sure you are more up to date than that.

Good luck in your work. I hope you will put me on your mailing list for further reports. If there are ways in which I may be helpful in the future, I hope you will feel free to inquire. It's always nice to keep in touch with things going on up in God's country.

Cordially,

Art Chickering

Arthur W. Chickering, Director
Distinguished Professor of Higher
Education

vb
enc.

State University of New York ✦ College at Cortland
Cortland, New York . 45

INSTITUTE FOR EXPERIMENTATION IN TEACHER EDUCATION
(607) 753-4705

October 28, 1980

Dr. Constance Leean
College of Education and Social Services
The University of Vermont
244 Commons Living/Learning Center
Burlington, Vermont 05405

Dear Dr. Leean:

I have had the opportunity to review the one page summary of your project for Undereducated Adults in Rural Vermont. Here at the Institute we have two populations, parents of migrant education and parents of head start children, who are interested in adult education. We are at a point in time of preparing a survey to determine the needs of this population as well as the restrictions which would inhibit their inability to participate in an adult education program.

Your survey appears to respond to both of these populations. I would request any information that might be available at this point in your study as well as a final report upon completion in February of 1981.

Needless to say, this is an important study for the rural population and I wish you success in this venture.

Very truly yours,

Tom

Thomas F. Toomey
Principal

TFT:mv

The University of Vermont

COLLEGE OF EDUCATION AND SOCIAL SERVICES
DEPARTMENT OF ORGANIZATIONAL,
COUNSELING AND FOUNDATIONAL STUDIES
NIE ADULT LEARNING PROJECT
228 Waterman
BURLINGTON, VERMONT 05405
TELEPHONE: (802) 656-2538

November 18, 1980

Mr. Thomas F. Toomey
Principal
Institute for Experimentation
in Teacher Education
State University of New York
College of Cortland
Cortland, NY 13045

Dear Mr. Toomey:

I am writing in response to your letter of October 28, 1980 in which you request information on the NIE Adult Learning Project currently underway at the University of Vermont. I have prepared a brief summary of the research project and have enclosed a copy for your review. As you will see, the project does not address traditional needs assessment questions, but rather focuses on understanding how rural adults with less than 12 years of formal education go about learning in nonformal settings. The project is nearing completion with a final report due at the end of March, 1981. A copy may be obtained by writing directly to the National Institute of Education in Washington D.C. after that time.

Regarding your needs assessment study, I would suggest you consult the following sources for assistance:

1. Carp, A. Peterson, R.E., and Roelfs, P.J. "Adult Learning Interests and Experiences." In K.P. Cross, J.R. Valley, and Associates, Planning Non-Traditional Programs: An Analysis of the Issues for Postsecondary Education. San Francisco: Jossey-Bass, 1974.
2. Cross, K.P. "Adult Learners: Characteristics, Needs, and Interests." In R.E. Peterson, and Associates, Lifelong Learning in America. San Francisco: Jossey-Bass, 1979.
3. Kovenoch, D. The Demand for Adult Education in Maine. Orono: Social Science Research Institute, University of Maine, 1978.

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4. New York State Education Department (University of the State of New York), Division of Continuing Education. New York State Continuing Education Needs Assessment (Report No. 1: Statewide Analysis). Albany: State Department of Education, 1977.

Please note that many needs assessment studies have been conducted across the United States. A consistent pattern of participation indicators is developing which include education level and age. This means that the more education a person has the greater the likelihood that (s)he will participate in educational services. This is also true for age. Also, new evidence is suggesting that many needs assessment studies are dealing more with the needs of program directors and/or policy makers than the learners themselves. In short, a "rational smokescreen" has been the charge. For a particularly good discussion of this problem, see the following source:

Monette, Maurice L. "A Critique of Need Assessment As the Basis of Educational Program Development: A Case for the Critical Examination of Values and Assumptions Informing Adult Educational Theory," unpublished doctoral dissertation. Columbia University Teachers College, 1977.

I hope the above sources prove useful to your project. If I can be of any further assistance, please do not hesitate to call or write.

Sincerely yours,

Constance Leean

Constance Leean, Ph.D.

P.S. Enclosed is a copy of some ERIC references which may relate to your needs.

Enc.

CL/dd